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ABSTRACT

This publication is one of two prepared for a South Asian Colloquium on issues related to teacher training in Bangladesh, India, Pakistan, and Sri Lanka. The papers in this volume focus on innovations and alternative strategies designed to improve quality in teacher education at preservice phase. The publication is in five sections. The first four sections were prepared by the respective national Ministries of Education. Section 1 is on Bangladesh and includes an overview of literacy and primary education and a discussion of provisions for initial training of teachers, the funding of education, and problems and remedies. Section 2, on India, includes a brief history of India's educational system, a review of key issues in the National Policy of Education, a discussion of issues facing Indian educators in the nineties, and several data tables. Pakistan is the focus of section 3 which looks at historical perspectives on teacher training, training of elementary and secondary teachers, qualifications for teacher educators, innovations in teacher training, analysis of teacher training programs, financing of teacher education, and recommendations for future development. The fourth section is on Sri Lanka and covers inservice and preservice teacher education, successful innovations in teacher training, problems and issues, and statistical information. The final section is an overview by Beatrice Avalos which summarizes the educational context and the characteristics, issues, and alternatives of teacher education in general and in each of the four countries. (Individual sections contain references.) (ND)

ED 389 690

Quality in Basic Education

Professional Development of Teachers

Initial Teacher Training: South Asian Approaches

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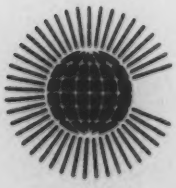

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QUALITY IN BASIC EDUCATION

Professional Development of Teachers

Initial Teacher Training: South Asian Approaches

Bangladesh
India
Pakistan
Sri Lanka

An Overview by Beatrice Avalos

Commonwealth Secretariat

COMMONWEALTH SECRETARIAT

Education Programme
Human Resource Development Group
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PREAMBLE

Initial teacher training provides the focus for two volumes in the Commonwealth Secretariat's series of publications on the professional development of teachers.

Papers in the two volumes were prepared for a South Asian Colloquium held in Colombo, Sri Lanka in April 1992. The Colloquium provided a forum for discussion of issues related to teacher training in Bangladesh, India, Pakistan and Sri Lanka. Innovations and alternative strategies which aimed to improve quality in teacher education at the initial phase were debated among educationists from governmental and non-governmental organisations. The four country papers in this volume were prepared by the respective Ministries of Education. A second volume deals with some substantive issues.

The Education Programme of the Commonwealth Secretariat would like to thank all writers for their contributions to the two volumes.

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1 BANGLADESH

Introduction

Bangladesh emerged as an independent state on the world map on 16 December 1971. It is a small country in South East Asia with an area of 143,000 square kilometres, but with a huge population of nearly 110 million. The population density is the highest in the world - about 782 per square kilometre. Population growth is 2.17 per cent per annum. Bangladesh is a developing agricultural country with a very low per capita income of US $180. Nearly 90 per cent of the population live in rural villages and are mostly dependent on agriculture. More than 80 per cent of the people live below the poverty line. Most Bangladeshis are Muslims (80 per cent); the rest are a mix of Hindus, Buddhists, Christians and the tribal communities.

Bangladesh and literacy

Bangladesh is still very backward in education. Illiteracy is probably the single greatest problem the country faces. The average literacy rate of the country as per the 1981 census is 23.8 per cent. The current (1991) rate has been estimated at about 26 per cent.The rate of literacy is lowest among the rural population, especially females, and slum dwellers.

Table 1 Percentage of literacy (1981 census)

ENTIRE COUNTRY			URBAN AREAS			RURAL AREAS		
Total	Male	Female	**Total**	Male	Female	**Total**	Male	Female
23.8	30	10	40.47	48.6	30.3	20.6	27.3	13.7

Achievements in the field of primary education

The emergence of Bangladesh as an independent and sovereign country in 1971 has given us a new life with hopes, energies, aspirations and promises. Great strides have been made in all walks of national life. Education, especially primary education, has received the highest attention in national development programmes. Since independence, the Government has implemented a range of policies for the improvement of primary education.

In 1973 all existing non-government primary schools (along with all assets and teaching posts) were nationalised, with a view to bringing about better management, control and quality of education. A National Education Commission was set up to recommend educational policies with feasible implementation strategies in the light of national needs, ideals and resources. The commission submitted its report in 1974 with recommendations for the improvement of education from primary to university level, and also for professional, vocational and technical education.

In 1976 a National Curriculum and Syllabus Committee of 50 subject specialists and professional experts was set up to frame curriculum and syllabi for grades 1 to 12 in the light of the recommendations of the National Education Commission. Nine sub-committees and 27 subject committees worked with the national committee. In all, 200 people worked for more than two years to develop seven reports, including one on Primary Education and one on Teacher Education.

The three Five Year Plans (1973-78 extended to 1980, 1980-85 and 1985/86-90) were prepared with the key objective of introducing Universal Primary Education. The specific objectives were more or less as follows:

(a) increasing pupil enrolment, especially girls' enrolment;
(b) reducing drop-out rates and repetition;
(c) improving the quality of instruction.

The main targets set for the purpose were:

- the construction, repair and renovation of school buildings and related offices and institutions
- the supply of furniture, equipment and teaching aids
- provision for water and sanitary arrangements
- the appointment of additional teachers and supervisors
- the training of teachers
- the supply of textbooks free of charge.

The allocation for the primary sub-sector was 13 per cent of the total education sector allocation during the first plan. It was increased to 46 per cent and 48 per cent during the second and third plans respectively.

Though the UPE project targets were not reached in all cases, satisfactory progress in respect of pupil enrolment and the expansion of physical facilities, supervision and training was achieved and management capabilities improved. In view of this progress, the government passed an act for free and compulsory primary education to be implemented in phases between 1990 and 1995.

A National Curriculum Development Centre (NCDC) was established in 1981. NCDC merged with the National Textbook Board in 1984 under the title National Curriculum and Textbook Board (NCTB). This board is responsible for the development of curriculum, syllabi, textbooks and teachers' editions, textbooks and teachers' guides for grades 1 to 12. In primary education, the board has so far:

- determined terminal competencies and class and subject-based essential learning competencies

- developed a competency-based curriculum, supported by teaching-learning strategies, continuous evaluation processes and remedial measures
- developed competency-based textbooks, plus teachers' editions.

An extensive training programme of Tk. 85,000 million on the dissemination of the competency-based curriculum is now in operation.

An Academy for Primary and Mass Education, subsequently renamed the National Academy Education (NAPE), was established in 1978 with the following objectives:

(a) to train teachers, teacher trainers, supervisors and administrators;
(b) to undertake research on various aspects of primary education; and
(c) to conduct Certificate in Education and Higher Certificate in Education examinations.

A separate Directorate of Primary Education was established in 1981 to manage the implementation of policies and programmes of Primary Education from national to school level. Within the Directorate a computer aided Management Information System (MIS) has been established to develop an efficient system of monitoring and evaluation.

A Facilities Department (FD) has been created under the Ministry of Education to provide physical facilities to schools, offices and institutions in respect of building, furniture and equipment.

Orientation courses have been and are being organised for community leaders involved in the implementation of UPE at the local level (including members of the now defunct Upazila Education Committee [UEC], School Management Committee [SMC] and Parent Teacher Association [PTA]).

Finally, several innovative measures have also been adopted. These are:

- the introduction of the programme of undivided classes 1 and 2 and Liberal Promotion Policy on the basis of Continuous Pupil Assessment (CPA)
- the supply to schools of yearly subject-based plans of work, weekly routine and cumulative record forms
- the introduction of Community Learning Centre (CLC) programmes in a number of selected schools
- the introduction of school-based recurrent in-service training (Cluster Training - CT) throughout the country to help teachers improve their professional knowledge and skills.

Prospects for primary education

From the above discussions, it is evident that we are marching forward steadily to combat illiteracy through the spread of primary education. We visualise great prospects ahead, because:

1 A total of 46,144 primary schools (37,647 government and 8497 non-government) are now distributed throughout the country in 68,000 villages.

2 A good number of Kindergartens (2500), Ebtedai Madrasahs, Maktabs and primary schools run by NGOs are also engaged in disseminating primary education.
3 A well co-ordinated system of administration and supervision at central, divisional, district and upazila levels has been developed.
4 An effective system of teacher training, in-service and pre-service, is in operation.
5 Teachers, administrators, supervisors, teacher trainers, members of local government authorities, SMC and PTA have been made aware of their duties and responsibilities through training and orientation programmes.
6 Research work on various aspects of primary education is being undertaken.
7 Curriculum, textbooks and teachers' guides are constantly revised according to national needs and ideals, and to keep pace with the world around.
8 Physical facilities in schools, offices and institutions are being increased.
9 Different mass media are playing important roles.
10 Mass Education Programmes, both government and non-government, are being strengthened.
11 Poor and disadvantaged parents are now more alert than ever before about the importance of educating their children.
12 Above all, the government is keen to make compulsory primary education a success.

Provision for initial training of teachers

The initial teacher training courses Bangladesh are:
The Certificate in Education (C in-Ed) course offered in 54 Primary Training Institutes (PTIs), 53 of which are government, one non-government;
The Higher Certificate in Education (HC in-Ed) course offered in four government PTIs;
The Bachelor of Education (B Ed) course offered in ten government Teachers Training Colleges (TTCs);
The Diploma in Education (Dip in-Ed) course offered in the Institute of Education and Research (IER), University of Dhaka.

All teacher training courses are institution-based (except the B Ed training course of the Bangladesh Institute of Distance Education, now almost phased out).

Certificate in Education course

Admission of trainees

A one year C in-Ed course has been offered in all the PTIs since 1952. Each PTI has an intake capacity of 200 trainees. Until 1987, 50 per cent of the trainees were deputed teachers from primary schools and 50 per cent were selected from outside candidates. Nearly 95 per cent of the teachers have completed their training.

The problem of finding employment for a huge number of trained unemployed teachers has meant that, since 1988, only deputed teachers have been admitted to the course. With the rapid decrease in the number of untrained teachers, pressure for admission to this course has also decreased. Moreover, since 1990, PTIs have been utilised for short-term competency-based curriculum dissemination programmes for working headteachers and assistant teachers. As a result, admission to the C in-Ed course has been limited to 50 trainees per PTI.

Table 2 Number of trainees in C in-Ed course from 1981-82 to 1990-91

YEAR	MALE	FEMALE	TOTAL
1981 - 1982	2378	6271	8649
1982 - 1983	2095	6801	8896
1983 - 1984	2662	2568	5230
1984 - 1985	2879	3436	6315
1985 - 1986	2366	3748	6114
1986 - 1987	2088	3341	5369
1987 - 1988	2288	3223	5511
1988 - 1989	2560	1765	4325
1989 - 1990	2229	1846	4065
1990 - 1991	1090	2300	3390

Staffing the PTIs

One Superintendent, one Assistant Superintendent and twelve Instructors (eight General; one Science; one Agriculture; one Physical Education and one Art and Craft) form the teaching staff of each PTI. In addition, five teachers work in each of the Experimental Schools attached to PTIs. The minimum qualifications for appointment as a PTI Instructor has been raised from bachelor degree with B Ed to second class masters' degree with B Ed or bachelor degree (at least two second divisions from SSC to degree examinations a must) with M Ed. The minimum qualification for appointment to the post of Experimental School teacher has been raised from HSC with C in-Ed to bachelor degree with C in-Ed or B Ed.

Curriculum development and reform

From 1952 to 1975, the curriculum and syllabi in the C in-Ed course was prepared (and revised from time to time) by a small number of experts invited to workshops by the Ministry or the Directorate of Education. As a result, the curriculum and syllabi were neither intensive nor effective.

In 1976 the National Curriculum and Syllabus Committee prepared seven volume of reports including one on Teacher Education. This report (apart from some recommendations) contained mainly the curriculum and subject syllabi of the C in-Ed course with proposed strategies for implementation. A seventeen member sub-committee (formed with representatives from PTI, TTC, IER, NAPE, primary schools and other organisations concerned with teaching, teacher training and curriculum development) prepared this curriculum over a period of about two years. During this time, the curriculum was reviewed by different experts in

teacher education and persons involved in primary education. Key features of this curriculum reform were:

1 It was prepared in line with the national primary curriculum.
2 It is well balanced in theory and practice, content and method.
3 Two new subjects, Agriculture and Population Education, were included.
4 Co-curricular activities were also included.
5 Evaluation methods and techniques were clearly stated.

New curriculum and detailed syllabi have been prepared, based on grade competencies for different subjects and terminal competencies for primary pupils, as determined by the National Curriculum and Textbook Board (NCTB). Textbooks and teachers' editions for grades 1 and 2 have also been written, and are being introduced into schools from January 1992. Preparation of textbooks and teachers' editions for grade 3 is under way.

The introduction of compulsory primary education has opened new dimensions in teacher training, such as the management of bigger classes and teaching disadvantaged children. In this context, the Ministry of Education felt that the C in-Ed curriculum should be thoroughly revised in line with the competency based primary curriculum. It formed a ten member committee for that purpose in 1989. The committee has developed the draft objectives, learning outcomes and revised curriculum structure of the C in-Ed course and has had these reviewed by concerned people and experts through meetings and workshops. Thereafter, the work on syllabus development for different subjects was undertaken by small groups of three to four persons. The draft syllabi were reviewed in the same way, before being finalised after two years' strenuous work. The entire finance was provided by UNICEF.

Textbook development

The absence of textbooks had been one of the major weaknesses of the C in-Ed. The Directorate of Primary Education took the responsibility of preparing subject textbooks in line with the curriculum prepared by NCSC in 1976. Groups of three to four experts were appointed as writers, with one writer and one modifier for each book. The draft textbooks were reviewed for context and language by PTI Instructors and trainees in actual classroom situations. Their suggestions were accommodated before the books were finally printed. Financial assistance for the entire process was offered by UNICEF.

These books have been used in PTIs since 1988. PTI Instructors have been given a thorough grounding on the contents and use of the books before introducing them in the classroom. The books have been greatly lauded by teacher training specialists and trainees of C in-Ed, B Ed and Dip in-Ed courses.

The Directorate of Primary Education has now started the process of preparing new textbooks for the C in-Ed course, based on the recently developed competency-based curriculum. The work of writing textbooks on different subjects has been entrusted to groups of one editor and two to

three writers. Before final printing, drafts of these books will be reviewed and tried out. Here also UNICEF will assist with the total cost.

Higher Certificate in Education course

Dr Shamsul Huq, Professor, IER, Dhaka University, conducted a study on *Reform in Primary Teacher Training* with financial assistance from UNESCO. He submitted his report containing detailed discussions and recommendations in 1987. His observations and recommendations with regard to the introduction of a new course, the Higher Certificate in Education, in the PTIs are quoted below:

> Considering that (i) primary teachers desire and deserve improvement of their qualification for career development; (ii) upward and horizontal mobility of teachers will increase their morale and motivation and strengthen the administration of the system; (iii) promotion of classroom teachers to supervisory and field level jobs would require further upgrading of their skills and knowledge particularly in administration and management aspects;
>
> It is **recommended** that:
> a) A one-year in-service modular Higher Certificate in Education (HC in-Ed) course be introduced in four PTIs, one in each division.
> b) Gradually the status of these PTIs be raised to that of Intermediate Colleges.
> c) HC in-Ed courses may also be offered through a correspondence-cum-contact programme organised by NAPE.

The Ministry of Education accepted these proposals and formed a committee to develop the curriculum and textbooks for the proposed HC in-Ed course.

The committee members (eight PTI Instructors and 24 Primary School headteachers) worked together for one year (1988-89) to develop draft objectives, outcomes, curriculum, subject syllabuses and seven textbooks for the HC in-Ed course through a participatory process. These drafts were reviewed one by one in joint meetings of the committee members and invited experts before being finally accepted. The entire cost was met from the UNICEF financial assistance fund. The one-year HC in-Ed course has been in operation in four PTIs since 1989-1990 in addition to the existing C in-Ed course. Fifty trainees are admitted annually to this course in each PTI. The subjects included in the course are:

1 Primary Education and Curriculum
2 Educational Administration
3 Psychology and Effective Education
4 School Management and Supervision
5 Teaching Learning Strategies
6 Community Participation in Primary Education and Communication
7 Practicum

Practicum is a new subject. Here, the trainees are first given basic theoretical knowledge (from their textbook) and then each trainee is attached to a primary school for two to three months to study academic and management aspects of the school and also to motivate the headteacher and assistant teachers, to improve them. Feedback from trainees, instructors and school authorities indicates that this aspect of the course is the most successful educational innovation ever tried out in Bangladesh.

Bachelor of Education/Diploma in Education courses

For graduate teachers, the Bachelor of Education course is offered by ten Teachers' Training Colleges (TTCs - all under the Directorate of Secondary and Higher Education) and the Diploma in Education course is offered by IER, University of Dhaka. Every year 400 graduate teachers, 150 Assistant Upazila Education Officers (AUEOs) and some Experimental School teachers are deputed on full pay to B Ed and Dip in-Ed courses. The B Ed course has been designed to prepare teachers to teach in secondary schools, and is not suitable for primary school teachers. Professor Shamsul Huq noted in his report on *Reform in Primary Teacher Training*:

> Considering that the present B Ed programme offered in ten TTCs is basically secondary education oriented and does not meet the needs of primary education;
>
> It is **recommended** that:
> A B Ed (Primary)/Dip in-Ed (Primary) programme be introduced soon at IER/NAPE which may in the long run be offered at the four divisional PTIs as well.

At the request of the Director General, Primary Education, IER has opened a primary unit in the Dip in-Ed course with appropriate curriculum changes.

After the Ministry of Education had agreed to introduce a B Ed (Primary) course at NAPE, the Director of the Academy submitted a draft curriculum to the University of Dhaka through the Director General. In view of the introduction of (i) compulsory primary education in Bangladesh, and (ii) the competency-based primary curriculum, it was later decided that the draft B Ed (Primary) course should be revised thoroughly. This responsibility was entrusted to a group of content and process specialists by the Director General. After thorough revision and improvement, the curriculum of the proposed B Ed (Primary) course has again been submitted to the University of Dhaka for approval.

If approval is obtained soon this course will be introduced at NAPE during the 1992-93 session. The revision work was carried out with financial assistance from UNICEF.

Funding education

Fund allocations under revenue head for primary education as a whole, and for PTIs and NAPE for the period from 1984-85 to 1989-90, are shown below:

Table 3 Fund allocation (in thousand Taka)

YEAR	PRIMARY	PTI	NAPE
1984 - 85	228,05,07	3,31,47	24,51
1985 - 86	276,87,81	3,44,63	25,41
1986 - 87	292,24,45	3,44,70	50,80
1987 - 88	335,19,22	3,89,40	41,48
1988 - 89	440,06,11	4,91,53	48,91
1989 - 90	450,15,56	5,50,37	53,24
1990 - 91	519,31,78	5,52,78	54,01
Total:	**2541,90,00**	**30,04,88**	**298,36**

Table 3 shows that out of a total of Tk. 25,419 million for primary education, only Tk. 329.8 million (300 to PTIs and 29.8 to NAPE) was allocated to the teacher training sector, approximately 1.39 per cent.

The total cost per candidate per year from 1984-85 to 1990-91 was Tk. 8570/-. This would be much less (Tk. 4280/-), if the full capacity of 10,000 trainees could be admitted each year. It also shows that the PTIs are under-utilised.

Problems and remedies

Problems

1 SSC, HSC and BA pass teachers undergo the same C in-Ed training. A consistent standard of instruction cannot be maintained in a class composed of heterogeneous groups of learners.

2 In spite of repeated changes in the curriculum and the introduction of new textbooks in both primary schools and PTIs, the standard of instruction has not improved appreciably. Instruction is mostly theoretical with insufficient emphasis on skills development.

3 The HC in-Ed course is not attractive to trainees as there is no incentive attached. As the course is not equated with other education or training either within or outside the education sector, it does not help in career development.

4 The B Ed course of Teacher Training Colleges, designed for secondary school teachers, is not suitable for primary school teachers and others working in this field. Moreover, there is a huge number of untrained teachers now and their number is increasing very fast. The quota for deputation to B Ed and Dip in-Ed courses is much less than actual demand.

5 There is no scope for obtaining a B Ed degree through correspondence or correspondence-cum-contact courses.
6 The facilities in teacher training institutions in respect of activity rooms, library, audio-visual aids and equipment are very meagre.
7 Teachers in PTIs have practically no scope for enriching their knowledge and outlook through visits, study tours, training and fellowship, either to neighbouring or more distant countries.
8 PTI Instructors mostly serve in the same post for twenty to twenty-five years before they receive any promotion in-service. In many cases, they retire from the same post. As a result, they suffer from frustration.
9 Although PTI is a post SSC level institution it is treated on a par with government high school and not with colleges. The low status of PTIs reflects directly on teacher training and indirectly on the total primary education sector.

Remedies

1 Considering that
(a) women who have passed SSC are not qualified to teach the modern primary curriculum, and
(b) thousands of women who have successfully passed HSC are unemployed, even in remote areas:
• the minimum qualification for primary school teachers should be HSC for both men and women.
2 Considering that
(a) 95 per cent of primary school teachers are trained, and
(b) traditional primary teacher training needs to be thoroughly revised for qualitative improvement:
• the three year BA in Education or Diploma in-Education course for HSC pass teachers should be introduced in PTIs in phases to replace C in-Ed and HC in-Ed courses.
3 Considering that
(a) a huge number of untrained graduate teachers are awaiting deputation for B Ed training, and
(b) the B Ed training course in the TTCs is not suitable for primary teachers:
• four PTIs in four divisions should be developed into Teacher Training Colleges offering B Ed and M Ed/MA in Education courses.
4 Considering that
(a) the deputation of teachers to different courses causes suffering to their respective schools and families, and
(b) educated youths other than teachers should have opportunities to receive different teacher training according to their qualifications and preferences:
• correspondence or correspondence-cum-contact courses should be introduced to offer B Ed, Dip in-Ed and M Ed/MA in Education degrees.
5 Considering that the teaching methods used by our teachers (especially teacher trainers) need to be improved through contact with modern methods and techniques:

• enough provision should be made for visits, study tours and fellowships abroad for PTI Instructors.

6 Considering that regular in-service promotion
(a) brings motivation and dynamism in employees, and
(b) is a legal right of government employees:
• the teaching posts of teacher training institutions should be graded in such a way that vertical mobility becomes possible.

7 Considering that
(a) PTI Instructors have equal qualifications with TTC teachers, and
(b) HSC pass and graduate teachers undergo training in PTIs:
• the status of PTIs should be raised to that of Intermediate or Degree Colleges.

8 Considering that proper equipment and aids are a pre-requisite of good teaching:
• PTIs should be provided with aids and equipment as the curriculum demands.

9 Considering that
(a) the quality of training received by teachers influences the quality of teaching in their schools, and
(b) investment in training may bring greater returns than that in general education:
• a generous attitude should be taken regarding the allocation of funds to the teacher training programmes.

2 INDIA

Introduction

In ancient India, a teacher devoted his whole life to learning and teaching. The teacher was constantly under observation and was expected to participate at any time in open assemblies and explain, expound and expand on ancient knowledge in the light of his own experiences. Though there was no formal course of training nor any degree awarded, the teacher was under almost life-long examination (Devi, 1968). It was important that he established his credibility as students flocked only to reputed teachers. Knowledge, communication skills and moral integrity were the basic requirements of a good teacher.

Beginnings of the modern system

After the takeover of the East India Company, there came a new system of education which worked on parallel lines with the indigenous system. The present teacher education in the country owes its origin to the system of training introduced by British missionaries in the late 19th century. The training of teachers in the 18th and 19th centuries focused on the orientation of teachers to the subject matter of 'Western Science and Literature' rather than on pedagogy (Mazumdar, 1968).

During the first quarter of the 20th century, the emphasis shifted to the methodology of teaching. After the thinking on Basic Education was initiated by Mahatma Gandhi in 1937, the approach to teacher education underwent further change and 'teacher preparation began to be viewed as education aiming at developing the teacher as a productive citizen of a democratic and co-operative social order, as a social engineer directly charged with the responsibility of changing society through education' (Mazumdar, 1968).

Post-independence

In 1947 India attained independence and, through Article 45 of the constitution, the country committed itself to the provision of universal education for all children up to 14 years of age. This quantitative expansion of education resulted in the mass provision of elementary teacher education which resulted in mass provision of elementary teacher training facilities.

Since India needed large numbers of teachers, the basic entry level qualifications had to be lowered, to the extent that the teacher training institutes were forced to provide basic preparation in subject content as well as pedagogy.

The sixties

The sixties brought significant changes in the educational canvas of the country. In 1961 the National Council of Educational Research and Training (NCERT) was set up to focus on issues in school education. The Kothari Commission on Education submitted its report and in 1968 the Government of India accepted the Commission's recommendations. The Study Group on the training of elementary teachers in India set up by the Government produced a report recommending that State Institutes of Education should be established to concentrate on education at primary level. Very soon many of the recommendations of the study group were given concrete shape: the State Institutes of Education came into being; a Department of Teacher Education was added within NCERT to focus on issues in primary teacher education.

The seventies

The seventies witnessed major steps towards the development of a National Curriculum. In 1978, the National Curriculum Framework was brought out. At the same time, NCERT developed a parallel document entitled *Teacher Education Curriculum - A Framework* and introduced it in various training institutions of the country. The National Council for Teacher Education (NCTE) was set up within NCERT.

Another significant event was the setting up of the Centre for Educational Technology under the umbrella of NCERT. The CET was to strengthen primary education by devising varieties of audio-visual materials, for both children and teachers in primary schools. The Satellite Instructional Television Experiment (conducted in collaboration with other agencies) paved the way for using television to strengthen primary school education.

The National Policy on Education

The major event of the eighties was the formulation of the National Policy on Education (NPE) in 1986. Almost thirty years after the Kothari Commission submitted its recommendations, the Government of India took the decision to formulate a new educational policy which would tackle the increasing problems in education, and would also be sufficiently forward-looking to meet the needs and aspirations of the nation entering the 21st century.

Since the adoption of the 1968 policy, educational facilities had expanded considerably and, by 1986, more than 90 per cent of the country's rural habitations had schooling facilities within a radius of one kilometre. A common structure of education (10 + 2 + 3) was introduced

all over the country and a national curriculum framework was accepted. These were major achievements, yet issues such as access, quality, financial outlay, etc. did not receive adequate attention and over the years the problems had become too massive to be tackled effectively.

The 1986 National Policy on Education examined all stages of education. This paper confines itself to those recommendations regarding the basic stages of education, in particular the recommendations on:

- universal enrolment and universal retention of children up to 14 years of age, and
- bringing about a substantial improvement in the quality of education.

Key recommendations

The key recommendations in these areas were:

1 There should be a child-centred and activity-based approach to learning at primary level.

2 The provision of essential facilities, symbolically called Operation Blackboard, should include at least two rooms that are usable in all weather, blackboard, maps, charts, other learning materials including toys. There should be at least two teachers in each school, one of whom should be a woman.

3 There needs to be a large and systematic programme of non-formal education, to cater for school drop-outs, children from habitations without schools, working children and girls unable to attend whole-day schools. Much of this work was to be done through voluntary agencies and Panchayati Raj institutions, the funding for which would be met by the Government.

4 Child care and pre-primary education, should be fully integrated, both as a feeder and a strengthening factor for primary education and human resource development in general.

5 A micro planning approach at grassroots level throughout the country is needed to ensure children's retention at school. The NPE accorded the highest priority to solving the problems of children dropping out of school.

6 By 1990 all children who attain the age of about 11 years should have had five years of schooling or its equivalent through the non-formal system.

7 By 1995 all children should be provided with free and compulsory education up to 14 years of age.

8 The system of teacher education should be overhauled. The NPE stated that teacher education was a continuous process and its pre-service and in-service components were inseparable. It recommended that the new programmes of teacher education should emphasise continuing education and the need for teachers to meet the changes envisaged in the policy. For this purpose the NPE proposed the establishment of **District Institutes of Education (DIETs)**. It was opined that substandard institutions would be phased out as DIETs become established.

9 Selected secondary teacher training colleges should be upgraded to complement the work of the State Council of Educational Research and Training. The NCTE would be provided with the necessary resources and capability to accredit institutions of teacher education and to provide guidance regarding curriculum and methods.

Revision of instructional materials

Based on the recommendations of NPE 86, NCERT spent two to three years revising all its instructional materials. The newly developed primary textbooks were based on an activity approach, and also detailed the learning outcomes expected from children. These textbooks have been in use for almost five years now.

In addition, draft guidelines for the development of the primary curriculum were revised in the light of suggestions received from the various agencies in the country. A revised document entitled *Minimum levels of learning at the primary stage - syllabi including common core components* was published. This indicated the minimum levels of learning in respect of each curricular area for all primary classes. The curriculum guidelines and syllabi developed by NCERT were sent to the state level agencies for facilitating the development of instructional packages in different curricular areas at state level.

Operation Blackboard

The purpose of OB was to ensure the provision of minimum essential facilities in primary schools - material facilities as well as learning equipment. It was NCERT's responsibility to work out the norms and specifications of the essential items to be provided to primary schools under OB. In collaboration with the Bureau of Indian Standards, NCERT brought out a document entitled *Essential facilities at primary stage - norms and specifications*. It was widely circulated to state level agencies to help them in their procurement.

The policy was to give preference to educationally backward blocks first. At the end of 1991, 64 per cent of schools in the country had been provided with these facilities.

In 1991 NCERT undertook a sample study to examine the supply of materials under OB and to canvass users' views on its likely impact on the universalisation of primary education. The study was carried out in 216 primary schools drawn from two blocks each in the states of Rajasthan, Gujarat and Tamil Nadu. The findings showed that:

- most of the schools had received maps
- 67.1 per cent had received globes
- 75 per cent had received charts
- more than 90 per cent of schools had received Mathematics kits, Science kits and mini tool kits and blackboards
- more than 80 per cent of the schools had received jigsaw puzzles, skipping ropes, balls, air pumps, etc.
- 83.8 per cent of the schools had two all weather rooms

- 88.2 per cent of schools had two or more teachers. - however, only 20.4 per cent of the two teacher schools and 42 per cent of schools with more than two teachers had a woman teacher.

OB training package

NPE 86 did not make any provision in the OB scheme for the orientation of teachers. But it was soon obvious that there was a great need to familiarise the teachers with the use of OB materials in day-to-day classroom activities so that the materials did not remain locked in the boxes. For this purpose NCERT developed a training package consisting of the following:

(a) print material in two volumes
Volume 1 - Awareness package giving information of a general nature
Volume 2 - Performance package containing subject specific activities as examples of the child-centred activities that the teacher can attempt in curriculum transaction;
(b) a set of 203 slides as support material for Volume 1;
(c) a set of 15 video films as support material for Volume 2.

This training package has now been widely distributed to the States. However, the scheme for mass orientation of teachers has yet to be cleared by the Government of India.

Project Mass Orientation of School Teachers (PMOST)

NPE 1986 stated that the teacher was the principal means for implementing educational programmes. New roles were expected of teachers. For example, the policy statement, 'Child-centred and activity-based process of learning should be adopted at the primary stage' implied that the teacher's role is as a mediator of learning rather than a disseminator of information. He or she would help children learn in and through their own environment; stimulate them to learn by themselves; help them develop an enquiring mind and act as a guide to identifying learning resources. This shift in emphasis from teaching to learning has a number of new dimensions for teachers' roles. Likewise, the concept of equality of opportunity was stated as 'to provide for equal opportunity to all not only in access, but also in the conditions for success', thus bringing out yet another important role for the teachers. There were many aspects wherein teachers were now to provide prestigious leadership roles in policy implementation.

These new dimensions in teachers' roles necessitated in-service education so that the proposed reforms could be understood and properly implemented (Sharma A.K.).

PMOST was launched as a centrally sponsored scheme in all States and Union territories during May-June 1986 to cover half a million primary and secondary teachers through 10,000 orientation camps held in 2500 training centres. The scheme involved three tiers of training: firstly, key personnel were trained by NCERT; they in turn trained the 'resource persons'; they in turn trained the teachers. Special training materials in modular form, plus supporting television programmes using satellite, were

produced to reach as many teachers as possible. The thrust of the orientation camps was on the participation of teachers in discussions on NEP and innovative methods of teaching.

District Institutes of Education and Training (DIETs)

NPE 1986 indicated the urgency to bring about 'a substantial improvement in the quality of education'. By the time the NPE was adopted, elementary and adult education systems were already too vast to be adequately supported by the existing national and State level agencies alone. The provision of decentralised support was imperative and led to the establishment of DIETs, with the objective of developing Institutes that would be closer to the field and therefore more sensitive to the problems of the children and the community.

A Centrally Sponsored Scheme of Restructuring and Re-organisation of Teacher Education was approved in October 1987. One of the five components of the scheme was the establishment of DIETs (the other components being Mass Orientation of Teachers, Strengthening Secondary Teacher Education Institutes, Strengthening SCERT and Establishing and Strengthening of University Departments of Education). By early 1992 about 257 DIETs had been sanctioned.

The functions of a DIET are primarily the training and orientation of elementary school teachers (both pre-service and in-service), headteachers and other officers, instructors and supervisors of non-formal and adult education systems, community members and resource persons. They also involve providing academic and resource support (in the form of materials, extension activities, etc.) to the elementary and adult education system in the district. Another important function is to carry out action research and experimentation to deal with specific problems.

The organisational model suggested for a DIET consists of seven academic branches:

1 Pre-service Teacher Education
2 Work Experience
3 District Resource Unit for Adult and Non-formal Education
4 In-service Programmes, Field Interaction and Innovation Co-ordination
5 Curriculum, Material Development and Evaluation
6 Educational Technology
7 Planning and Management

The average annual intake for pre-service training will be about 40 and for in-service training about 600. The academic posts provided are 25, with 23 supporting staff. The estimated budget per DIET is about Rs 24.4 lakhs. Of this, 16 lakhs is allocated to staff salaries; Rs 5 lakhs for conducting training programmes; Rs 1.1 lakhs for extension activities; and another Rs 2.3 lakhs for meeting miscellaneous expenditure.

The setting up of DIETs is a big step forward in improving the quality of teaching in primary schools at the district levels. Once the personnel in DIETs are fully in position and adequately trained, it should make an

impact on the training of teachers and consequently on the teacher-learning in the classrooms.

Elementary teacher education curriculum

Alongside the efforts to set up DIETs, NCERT undertook to revise the existing elementary teacher education curriculum. The draft curriculum, based on NCERT's *Teacher Education Curriculum Framework for Elementary and Secondary Education* was developed in 1989 and sent to experts in the field for their comments. Suggestions and modifications were incorporated in the final document.

Elementary education normally extends from standards I to VIII, covering the age group 6 to 14 years. It comprises two distinct stages, referred to as the primary stage (standards I to V) and the upper primary stage (standards VI to VIII). Generally the class teacher system, which requires a teacher to teach almost all the academic subjects, is followed in the primary stage, while the special interests and proficiency of the teacher are taken into account at the upper primary stage. Each teacher must also have sufficient knowledge to impart health and physical education, art education and work experience. He or she should be able to handle handicapped children and be acquainted with at least one area from adult education, non-formal education, women's education or library service, etc. The curriculum components have been designed keeping these requirements in mind.

The revised draft curriculum was divided into four major components, as shown in Table 1 on page 19:

1 Foundation courses
2 Stage relevant specialisation
3 Additional specialisation
4 Practicum/Field work

Foundation courses

This component may provide the prospective teacher with the theoretical grounding behind the aims and objectives of education in the context of national development, and with reference to socio-cultural, political and economic imperatives. It also aims to impart knowledge and understanding of the process of human development and learning.

Stage relevant specialisation

This component may include background on the history and scope of education at elementary or secondary level. It may also cover the functions of the teacher, with reference to curriculum planning, instructional strategies and skills, evaluation, management, guidance and counselling, co-curricular activities, etc.

Additional specialisation

Subject areas like art education, adult education, non-formal education, special education, population education, etc. have been included to give higher knowledge, understanding and skills to the teacher trainee in an

educational area of his interest. (A few of these areas have been discussed in this document.)

Table 1: Elementary Teacher Education Curriculum

	CURRICULUM COMPONENTS	WEIGHTAGE IN TERMS OF TIME	
A	**Foundation Courses**		**20%**
1	Education in Emerging India (Philosophical and socio-cultural perspective)	10%	
2	Elementary School Students Learning Processes, Adjustment (Educational Psychology)	10%	
B	**Stage relevant specialisation**		**30%**
3	Elementary Education and Teacher Functions	5%	
4	Language Teaching (Mother Tongue and English)	5%	
5	Mathematics Teaching	5%	
6	Environmental Studies Teaching (as related to Stds. I to V)	5%	
7	Health and Physical Education	5%	
8	Arts Education, and		
9	Work Experience	5%	
C	**Additional specialisations**		**10%**
10	Science Teaching and Social Studies Teaching/Pre-school Education	5%	
11	Elective One Adult Education; Non-formal Education; Social Education; Tribal Education; Multiple Class Teaching; Population Education; Special Education; Educational Technology, etc.	5%	
D	**Practicum**		**40%**
12	Practical work	20%	
13	Internship in Teaching (in Primary and Upper Primary/Pre-school systems	20%	

Practicum/Field work

This component deals with the central objective of teacher education: the development of professional competencies in areas such as evaluation, managing classroom learning, organising co-curricular activities, guiding students, and other similar activities which are 'beyond' the classroom.

Guidelines and syllabi

The guidelines and syllabi for elementary teacher education were developed through a series of workshops held in 1989 and 1990. These are outlined below.

A Foundation courses

1 Education in Emerging India
2 Educational Psychology

B Stage relevant specialisation

3 Teacher Functions
4 Teaching of Mother Tongue
5 Teaching of English
6 Teaching of Mathematics
7 Teaching of Environmental Studies [Science]
8 Teaching of Environmental Studies [Social Studies]
9 Teaching of Health and Physical Education
10 Teaching of Art Education
11 Teaching of Work Experience

C Additional specialisation

12 Non-formal Education
13 Multi-grade Teaching
14 Girls' Education
15 Education for Disabled

D Practicum/Field work

The detailed guidelines and syllabi along with suggested weightages in terms of time are being worked out. It is also suggested that while evaluating the students' performance, 40 per cent weightage may be given to internal assessment.

Non-formal education

NPE 1986 recommended a large and systematic programme of Non-formal Education (NFE) for habitations without schools, school drop-outs, working children and girls who cannot attend whole day schools. NFE is visualised as a child-centred, environment-oriented, flexible system to meet the educational needs of comparatively deprived geographical areas and socio-economic sections of society. The essential characteristics of NFE are

organisational flexibility, a curriculum relevant to the learner's needs and decentralisation of management.

Past experience had shown that training of NFE instructors and supervisors was poor. In the revised scheme, funding has been provided for an initial training of 30 days for all instructors, followed by about 20 days retraining every year. Training in the second and subsequent years may be imparted in one session or broken into two sessions at different times. The budgeted cost of training for instructors is Rs 600 per annum for primary level and Rs 1200 per annum for upper primary level. The main criteria for the selection of NFE personnel is their commitment both to non-formal education and to the local community.

In future, training of NFE instructors and supervisors will be one of the functions of DIETs. At the moment, special provision is being made for training through good teacher training institutions, voluntary agencies or by bringing together good trainers under the auspices of the project administration.

NCERT and SCERTs have developed instructional materials for both children and instructors. Training manuals have been developed and key personnel trained. Through these key personnel, about one lakh of instructors have been trained.

At the moment about 2.7 lakh NFE centres are functional. If approximately 25 children are involved per centre, 6.75 million children should be attending NFE centres in the country.

Education of disabled children

In the context of providing universal primary education, a group which always remains difficult to reach is disabled children. NPE 1986 recommended a scheme of integrated education for the disabled as it was felt that the objective should be 'to integrate the physically and mentally handicapped with the general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence'.

Four levels of training are envisaged to prepare teachers to meet the special requirements of disabled children:

1 There is to be a minimum special education module for all teachers in the pre-service programme.
2 Special Education is to be an elective subject in general teacher training for those teachers who would like to have a deeper understanding of education for children with special needs.
3 There is to be a multi-category training programme to equip teachers with the necessary competencies to meet the special education needs of children, irrespective of their particular disability. This is based on the premise that the strategies of teaching and management of children with different disabilities are, to a certain extent, similar. This scheme is particularly useful to serve the needs of children from clusters of small primary schools in rural areas.
4 Training of teachers for special schools is to be provided by a course which consists of a core programme covering different disabilities with specialisation in one single disability.

The National Curriculum Framework for Teacher Education envisages special education as an integral component. The NCERT has developed training courses for the first three levels while the Rehabilitation Council has developed course for the fourth level of training. Under the Centrally Sponsored Schemes for Teacher Education, provision has been made to cover the first two levels of courses in the DIETs and Colleges of Teacher Education (CTE). The proposal to offer a non-categorical training programme for special teachers in at least one DIET and CTE is being considered. Many universities have also set up Special Education Departments to train workers.

Issues of the nineties

The major issues in providing universal basic education are:

- making education accessible
- universal enrolment and retention of children at least up to the fifth class
- improving the quality of education to ensure that the basic competencies are mastered.

Making education accessible

The Fifth Survey of Education (1986) showed that almost 90 per cent of the rural population are now served by primary schools/sections within a distance of one kilometre. Yet there are still at least eight states which fall below the national average and, if examined at district levels, the provision will be much less. Efforts are required to identify these villages and build primary school/NFE centres within commutable distance.

Enrolment and retention

As per the Selected Educational Statistics of the Government of India (1988-89), the gross enrolment ratio is:

	Boys	Girls	Total
Class I to V	115.71	82.51	99.56

The picture will not be so bright if the age-specific ratios ate taken into account. The enrolment drive for girls needs to be taken up with greater enthusiasm.

More difficult than enrolment is the task of retaining children for at least the first five years of school. At any point in time, 50 per cent of children in the 6-11 age group are not in schools. The Fifth survey results show that for every 100 children enrolled in Class I, 34 drop out by Class III and another 16 by Class V. Much of the drop-out is in classes I and II and emphasises the need to make early primary education much more child-centred. The implication for teacher training is to emphasise child-centred, activity-based teaching methods with the accent on individual needs, abilities and interests.

The quality of education

One of the most crucial current issues in the universalisation of education is how to ensure a basic minimum level of learning in children. Over the

years a large number of studies have shown repeatedly that children from disadvantaged schools/homes do not master the basic competencies of reading, writing and numeracy expected in the first five years The reasons are many, including disinterest in schooling, lack of rapport between children and teachers, unsuitable teaching methodology, lack of time for studies due to domestic chores and lack of support at home.

A document entitled 'Minimum levels of learning at primary stage' was produced, spelling out the basic competencies required of children from Classes I to V. The document is being disseminated widely for field trials. Teacher Manuals are also being developed to acquaint teachers with the concepts of minimum levels of learning (MLL) and possible strategies they can adopt to help children attain these MLLs.

In both pre-service and in-service training programmes, attention needs to be focused on MLLs so that teachers understand the competency-based approach towards the teaching-learning process.

DIETs

The setting up of DIETs is a step forward in district level educational planning. However, the academic staff of DIETs needs to be trained adequately in the child-centred, activity-based approach to primary education. A majority has no experience in primary school teaching and views it as subject teaching similar to secondary school level. A crash training for such staff, with adequate audio-visual support, is essential.

Multi-grade teaching

Only 14.83 per cent schools have a teacher for every class from I to V. 28.91 per cent are one teacher schools while 31.91 per cent are two teacher schools, so that as many as 60 per cent of the schools are one or two-teacher schools. This has vital implications for teacher training. An introduction to multi-grade teaching techniques should be compulsory for all primary teacher trainees.

Education of girls

The single largest group not in school is that of girls. The Fifth Survey showed that the gross enrolment for girls is 82.5 per cent at the primary stage. This is only an average figure, and there are wide variations from State to State and from district to district within a State.

It is important that the teacher training curriculum includes a detailed discussion of the issues regarding girls' education so that teachers are sensitised to the problems and are better equipped to deal with them in the field situation.

Non-formal education

On one side are the problems created by bringing more and more children into the schools. Yet it is also urgent to reach out to the millions of children who are outside the educational net.

At present, it is not possible to assess objectively the quality of learning imparted in the NFE centres. The training of instructors requires close examination. An effective monitoring system has to be developed to ensure that children are achieving the minimum levels of learning. These may not be comparable to the levels achieved in formal schools, but should at least help many more young people function effectively in the day-to-day transactions of life.

Operation Blackboard

Operation Blackboard was a marathon effort to equip the primary schools. Now it is important to see how these materials are being used by teachers. If this was just a supply exercise, the effects of such a massive effort will be minimal. The training of teachers in the use of OB materials is an absolute necessity.

Early childhood care and education (ECCE)

Studies have clearly shown that early childhood education helps to develop school readiness in children, promotes skills to cope with the demands of primary school and lessens their drop-out from schools. Considering that the drop-out rate is at its highest in classes I and II, it appears desirable to have an integrated unit of pre-school and early primary school, where children are taught through play and activities. A teacher training programme targeted at these young children should go a long way towards tackling these problems.

Community involvement

Whether it is primary, non-formal or early childhood, the success of educational provision very often depends on the extent of community involvement and monitoring. The recent campaign approaches used in adult education indicate how much hidden expertise is available in the community and, if motivated, the degree to which it can be utilised.

At the moment the teacher and the community by and large operate from two sides of the fence. Eliciting community support is not the strong point of most teachers. Teacher training programmes need to place greater emphasis on working more closely and more effectively with the local community

Conclusion

Emphasis for further action lies in sensitising teacher trainees regarding the main issues in basic education: enrolment, retention and quality of learning. They need to be convinced about the importance of child-centred, activity-based methods of teaching, and about the necessity to see that children master the minimum competencies expected of them at each stage. It is also important that they learn to work with the community and elicit their support in tackling major issues in primary education.

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Tables

Table 2: Statewise teachers working at various stages and percentages of female teachers

Sl No	State/Union Terr	PRIMARY STAGE No of teachers	Female teachers %	Trained teachers %	PT ratio	UPPER PRIMARY STAGE No of teachers	Female teacher %	Trained teachers %	PT ratio
1	Andhra Pradesh	160194	36.53	97.07	44	48837	41.87	96.02	24
2	Arunachal Pradesh	2597	18.87	42.86	34	1029	16.23	37.32	17
3	Assam	62833	24.74	62.87	36	30758	18.70	29.37	30
4	Bihar	130850	18.05	93.43	60	77404	17.42	95.1	25
5	Goa	4156	67.66	80.37	29	2213	56.80	86.71	37
6	Gujarat	68852	44.81	98.98	61	85544	41.17	98.03	21
7	Haryana	29650	43.53	99.46	53	16132	38.72	99.11	40
8	Himachal Pradesh	17118	36.81	96.80	38	10439	24.72	98.45	29
9	Jammu & Kashmir	19538	38.52	78.29	33	14324	34.08	72.33	19
10	Karnataka	91643	32.82	91.27	48	40655	42.62	94.08	33
11	Kerala	61468	61.20	94.35	40	55115	57.34	92.48	30
12	Madhya Pradesh*	177945	21.63	68.96	39	66795	24.74	71.05	29
13	Maharashtra*	192333	38.22	89.88	42	102546	37.29	94.98	37
14	Manipur	10754	22.43	56.05	17	4219	24.56	36.26	16
15	Meghalaya	6871	39.94	49.99	37	3075	37.92	30.41	21
16	Mizoram	3296	44.11	57.58	27	2656	21.16	48.87	13
17	Nagaland	5622	25.36	44.47	20	2929	29.02	36.22	15
18	Orissa	85321	16.08	87.66	39	28149	13.14	75.08	31
19	Punjab	48215	53.27	98.73	40	18475	40.95	97.59	39
20	Rajasthan	76758	23.07	84.10	55	63308	22.99	88.55	18
21	Sikkim	4048	36.34	49.68	15	874	26.32	28.83	17
22	Tamil Nadu	129885	40.11	99.97	56	69703	42.28	99.88	37
23	Tripura	10040	23.35	40.36	36	3711	21.85	42.33	29
24	Uttar Pradesh	268165	21.32	94.89	41	111289	19.65	88.84	35
25	West Bengal	167172	20.45	64.13	41	44630	19.18	71.32	41
26	A & N Islands	1134	42.15	95.50	31	606	36.47	93.56	26
27	Chandigarh	1826	93.04	99.95	28	866	80.37	99.77	31
28	Dara & Nagar Hav.	351	47.01	96.87	35	171	44.44	85.38	27
29	Daman & Diu	277	50.90	83.03	41	185	30.27	88.11	36
30	Delhi	23700	66.11	99.01	34	13382	54.88	96.99	31
31	Lakshadweep	244	35.25	90.57	28	198	27.27	93.43	18
32	Pondicherry	2647	41.97	98.19	34	1395	39.93	99.64	29
	All India	**1865503**	**30.56**	**86.66**	**44**	**921612**	**32.18**	**87.33**	**29**

* *Estimated figures*

Table 3: Primary schools according to numbers of teachers

Sl No	State/Union Terr	ZERO TEACHER Number	%	ONE TEACHER Number	%	TWO TEACHER Number	%
1	Andhra Pradesh	615	1.37	13217	29.37	19047	42.32
2	Arunachal Pradesh	4	0.42	526	55.25	256	26.89
3	Assam	0	0.0	8903	34.41	10646	41.15
4	Bihar	757	1.47	13303	25.89	23407	45.56
5	Goa	0	0.0	167	16.82	419	42.20
6	Gujarat	250	1.97	4784	37.64	4589	36.11
7	Haryana	42	0.87	382	7.88	1890	38.98
8	Himachal Pradesh	31	0.45	1951	28.26	3174	45.97
9	Jammu/Kashmir	35	0.47	4380	58.67	2341	31.36
10	Karnataka	0	0.0	14350	62.33	6434	27.95
11	Kerala	0	0.0	19	0.31	61	1.0
12	Madhya Pradesh	129	0.2	22163	34.58	21500	33.55
13	Maharashtra	193	0.51	16660	43.73	9157	24.04
14	Manipur	0	0.0	510	18.50	820	29.74
15	Meghalaya	0	0.0	1969	53.33	1046	28.33
16	Mizoram	0	0.0	119	11.84	273	27.16
17	Nagaland	0	0.0	42	3.71	132	11.67
18	Orissa	200	0.59	14112	41.29	8746	25.59
19	Punjab	168	1.31	1457	11.35	4067	31.68
20	Rajasthan	52	0.19	15352	54.63	6141	21.85
21	Sikkim	0	0.0	21	4.49	67	14.32
22	Tamil Nadu	0	0.0	2724	9.31	10416	35.59
23	Tripura	1	0.05	145	7.52	512	26.57
24	Uttar Pradesh	147	0.19	8891	11.77	22047	29.18
25	West Bengal	2	0.0	1679	3.46	14065	29.03
26	A & N Islands	0	0.0	41	23.16	43	24.29
27	Chandigarh	0	0.0	1	2.27	3	6.82
28	Dara &Nagar Hav.	2	1.61	83	66.94	28	22.58
29	Daman & Diu	0	0.0	3	9.38	3	9.38
30	Delhi	0	0.0	3	0.16	9	0.49
31	Lakshadweep	0	0.0	1	5.56	0	0.0
32	Pondicherry	0	0.0	75	22.12	50	14.75
	All India	**2628**	**0.5**	148033	**27.96**	**171389**	**32.38**

Table 4: Teacher training at different levels

Course	Stage for which teachers trained	Duration	Entry qualifications	Selection criteria	Institution type	Administrative control
Nursery/ Primary	Pre-primary	1 year/ 2 years	Matric./ Higher/ Sr. Sec.	Academic record Training Inst.	Nursery/Pre-primary Teacher Training Institutes	State Dept of Educ.
Junior Basic trg/ Basic trg/Cert in Dip in Educ	Primary/ Elementary	2 years	Matric./ Higher/ Sr. Sec. Intermed.	Academic record & merit in interview/ entrance test	Jr Basic Training Institutions/DIETs	State Dept of Educ.
Multi-category trg for Special Educ	Elementary	1 year	+ 2	Deputation by State Govts. Merit in + 2 for freshers	RCE.& NGO run institutions	NCERT
Bachelor of Educ (B Ed)	Middle/ Sec/Sr. Sec.	1 year	Graduation/ Post-grad	Academic record & merit in interview/ entrance test	Colleges of Educ./ Sr. Teacher Trg Institutes/Educ. Depts in Univs	College Management/ Univ.
B Ed (Special Educ)	Middle/ Sec.	1 year	Graduation	As per University	Univ Depts/Units in Spec. Educ. in Colleges of Educ.	Univ & College Management

3 PAKISTAN

Introduction

The evolution of the system of teacher education which took place with the gradual development of the education system in Pakistan suffered from 'stagnation and slow growth' since its importance was never fully realised. The attempts to expand and reorientate the educational system in accordance with the country's cultural and economic traditions and aspirations have brought the importance of teacher education to the forefront especially after the launching of the massive Five Year Plans and the publication of reports on National Education from 1947 to 1991.

The shortage of teachers, especially teachers of science and technical subjects and trained teachers at all levels of education is a primary cause of the low 'efficiency' of education in the country. The teacher shortage combined with inefficient teaching is largely responsible for one of the most worrying problems in education, i.e. the high drop-out rate. Many students repeat grades and drop out because of inadequate teaching. The teacher education programme, therefore, has to be planned and directed to meet the demand for teachers in the quantitative expansion of education and also to raise the quality of teachers to achieve higher standards in education. In doing this, an account of the future requirements of the educational system should be taken into consideration.

Though there have been overall revisions to teacher training programmes in Pakistan, there has been no systematic evaluation of their effectiveness to assess strengths and weaknesses, or to identify from empirical evidence where the programmes could be modified to improve teacher training. This paper will not attempt such an evaluation. Rather it will describe training courses from the perspective of their stated objectives and course content, in an attempt to characterise the preparation they provide the classroom teacher.

In Pakistan, as elsewhere, teachers move from training courses into a variety of classroom settings. These include multi-grade classrooms taught by a single teacher, crowded classes, classes with only a few students, classes equipped with adequate textbooks, classes where children share the same textbook, schools with adequate facilities (in terms of building, blackboards and desks), and shelterless schools exposed to the elements, with hardly any blackboards and with few writing materials.

It is normally assumed that training will satisfy both the theoretical and practical needs of the teaching environment; that a trained teacher will know how to cope with the practical management and organisation of instruction in the classroom, as well as the theoretical aspects of child development and learning. However, it cannot be assumed that a teacher will absorb this knowledge or be able to apply theoretical knowledge to practical problems automatically without explicit instruction. This paper looks at the models of teaching presented to trainees and analyses both the implicit and explicit assumptions about teaching that underlie them.

Teacher training in historical perspective

As a nation Pakistan is very young, but as a culture it is centuries old. From the earliest days of Islam the Muslims have held education in high esteem, as evidenced in the Holy Prophet's injunctions to parents to educate their children. Educational institutions were developed primarily for the purpose of perpetuating the values of Muslim Society. Today, a substantial part of the curricula is still devoted to this objective.

Criticisms levelled at the instructional system are not new. As early as the fourteenth century Ibn Khuldoon protested against the methods of teaching then prevalent in the Muslim World. These methods were mostly based on memorisation and cramming of factual information. Others, such as Aurangzeb, the Mughal Emperor, who sought improvement in teaching methods, criticised learning which was not related to the context in which it existed.

Under colonial rule the British sought to improve methods of instruction through the establishment of training colleges and Normal Schools. It was during this period that certification for primary school teaching was set at eight years of general academic training and one year of professional training. This practice continued after independence in 1947.

At independence, Pakistan inherited an educational system designed to produce a class of people who would serve the administration and perpetuate the old socio-economic order in the country. This socio-economic order was of a feudal nature which exploited the masses economically and prevented them from raising their standard of living. Curricula, textbooks and teaching materials were devised to serve such ends rather than the creation of a dynamic and progressive society where all citizens are given an opportunity to improve themselves.

Soon after independence, one of the country's first priorities was to develop such a dynamic society through broadening the base of educational opportunities. The Pakistan Educational Conference was convened in Karachi from November 27 to December 1, 1947, to assist the Government of Pakistan in determining future educational policy. Sending a message to this conference, Quaid-i-Azam Muhammad Ali Jinnah noted:

> There is no doubt that the future of our State will and must greatly depend upon the type of education we give to our children, and the way in which we bring them up as future citizens of Pakistan. Education does not merely mean academic education. There is an immediate and urgent need to give a scientific and technical education to our people in order

to build up our future economic life. We should not forget that we have to compete with the world which is moving very fast in this direction. (Education Conference, 1947)

Participants at the conference raised the issue of teacher training and the Primary and Secondary Education Committee agreed that 'a properly trained and reasonably well paid teaching profession was essential to the development of a great state'. The Committee therefore suggested that 'the Provinces should take necessary steps to ensure (i) the proper training of teachers and (ii) an adequate salary scale'. Since then, Governments have attempted to bring teacher training programmes into line with the developmental and social needs of the country. The following teacher training programmes are products of these efforts.

Teacher training programmes

Teacher education is not an end in itself. It is a means to an end. The aim of teacher education is the aim of education itself. On the quality of teachers depends the realisation of aims that the schools seek for their students to achieve. The key note of the Third Five Year Plan (1965-70) is 'quality of education'. One of the greatest hindrances in the implementation of educational programmes is the inadequate supply of qualified teachers. It is, therefore, essential that the quality of teacher education is considered alongside its quantitative expansion.

Table 1: Teacher Training Programmes

PROGRAMME OF TRAINING	QUALIFICATION FOR ADMISSION	DURATION OF TRAINING	CLASSES TO TEACH
PTC	Matriculation	1 acad. year	I to V
CT	Intermediate	1 acad. year	I to VIII
B Ed. (12 + 3)	Intermediate	3 acad. years	VI to X
B Ed. (14 + 1)	BA/BSc	1 acad. year	VI to X
M Ed	B Ed	1 acad. year	VI to XII + Supervision
MA Educ	BA/BSc	2 acad. years	VI to XII + Supervision

In Pakistan there are different programmes of teacher training offered in Colleges, Institutes and Departments of Education for the training of primary school teachers, secondary school teachers and supervisors, as

shown in Table 1 above. Colleges of Education for Elementary Teachers offer two main training programmes: the Primary Teaching Certificate (PTC) and the Certificate in Teaching (CT).

There are two main training programmes offered for secondary school teachers in Colleges of Education: a one year B Ed Programme (14 + 1 model) and a three year BA/BSc+ B Ed programme (12 + 3 model). Supervisors and administrators are trained in the Institutes of Education and Research and Departments of Education in the universities. These Institutes/Departments offer courses leading to M Ed or MA Education degrees.

Training of elementary school teachers

The origin of these programmes goes back to the establishment of Normal Schools in the latter half of the 19th century. At present elementary level teacher training programmes are offered in 87 Normal Schools and Colleges of Education for Elementary Teachers.

Primary Teaching Certificate

This one year course covers the following subjects:

1	Principles of Education and Methods of Teaching	100
2	Child Development and Counselling	100
3	School Organisation and Management	100
4	Health and Physical Education	100
5-10	Six Methods of Teaching Courses in subject areas	600
11	Short Term Practice Teaching	50
12	Long Term Practice Teaching	150
	Total marks	**1200**

Prospective students must have completed Matriculation, i.e. ten years' schooling.

Certificate in Teaching

This is a one year course which prepares teachers to teach all subjects up to 8th grade, including English. The course covers the following subjects:

1	Theory and History of Education	100
2	Child Development	100
3	General Methodology and Preparation of Teaching Aids	100
4	School and Community Development	100
5	Counselling, Testing and Evaluation	100
6	Organisation of Elementary Education and School Management	100
7-10	Four Methods of Teaching Courses in subject areas	400
11	Short Term Practice Teaching	50
12	Long Term Practice Teaching	150
	Total marks	**1200**

Prospective candidates must have FA/FSc certificate, i.e. twelve years' schooling.

Training of secondary school teachers

At present there are four Institutes of Education and Research, two Departments of Education, and eleven Colleges of Education training secondary school teachers. These institutions play a key role in educational change.

The one year B Ed course covers the following subjects:

1	Perspectives of Education in Pakistan	100
2	Human Development and Learning	100
3	School Organisation and Management	100
4	Evaluation and Guidance	100
5	Society, School and Teacher	100
6-8	Special two Methods Courses (Content and Methodology separately)	400
10	Individual Project	100
11	Practice Teaching	200
	Total marks	**1200**

Some of the universities have developed their own programmes for training secondary school teachers.

Qualifications and professional growth of teacher educators

The present expansion and development of education means that teacher educators are increasingly needed at a senior level, in areas such as teaching, planning, research, administration, curriculum development, testing and evaluation, guidance and counselling, development of instructional materials, textbooks and instructional technology. The National Committee on Teacher Education proposed that highly qualified teacher educators (preferably with a PhD in Education) should be selected for such positions.

Teaching staff for professional subjects should possess an MA/MSc plus MA Edu./M Ed degree (with specialisation in the professional area to be taught); or a Master's degree in the relevant subject plus an MA Educ/ M Ed degree. However until such time as properly qualified teacher educators are available, those who hold Master's degrees, either in the relevant subject area or in Education, and who have adequate teaching experience, may be accepted for content and special method courses only.

Teacher educators should teach at least three lessons each semester in the experimental/practising school in order to be conversant with the problems of teaching at that particular level. Teacher educators should be more frequently associated with curriculum development and educational research programmes.

Provision should be made for cognate subject-area meetings to be convened by method specialists working in Colleges of Education. Issues and problems pertaining to the conduct of lessons in different subject areas such as science, mathematics, languages, etc. were recommended for discussion. Measures for improving the standard of practice lessons should also be adopted .

Innovations in teacher training

Bachelor in Education (12 + 3 model)

One academic year is a very short training time. Out of a list of 119 countries, 52 per cent offer a four year teacher training programme and some extend it to as much as five or six years. The academic and professional qualifications of teachers *do* contribute to raising standards in education. Low standards are generally attributed to the low level of teachers' qualifications. To overcome this problem the 12 + 3 programme of secondary school teacher training needs to be encouraged which can ultimately be replaced with a 12 + 4 programme.

The three year B Ed was originally introduced in the mid 1970s. The minimum educational qualification for admission is Higher Secondary School Certificate (Intermediate) in humanities or science. The programme covers the following subjects:

ACADEMIC COURSES

A	**Required courses**	**(9 Credit hours)**
1	Pakistan Studies	3 Cr. hours
2	Urdu	3 Cr. hours
3	Functional English	3 Cr. hours

B	**Specialisation**	**(45 Credit hours)**
1	General Group	BA
2	Science Group	BSc
3	Commerce Group	BCom
4	Agriculture Group	BSc Agri
5	Home Economics Group	BSc Home Eco
6	Industrial Group	BTech (24 Cr. hours)

C Elective courses for all (6 Credit hours except for Industrial Group who require only 3 Credit hours)

Any three not directly related to the area of content specialisation.

PROFESSIONAL COURSES

A Required courses **(18 Credit Hours)**

The same as in 14 + 1 Model scheme of studies.

Additional courses required for Industrial Group (only 6 Cr. Hours)

1 Introduction of Vocational Education
2 Occupational Analysis
3 School Shop Management

B Special Methods of Teaching (6 Cr. hours).

C Professional Electives (3 Cr. hours for all except Industrial Group)

D Practice Teaching (13 Cr. hours)

These programmes were approved by the National Committee on Teacher Education and were implemented in 1976-77. Some of the universities have made local changes. In spite of these efforts to revise the teacher education programmes, they have been subject to criticism. The courses which the prospective teachers undergo are defective both in respect of content and duration.

Field-based teacher training programme

The Field-Based Training (FBT) programme is a compensatory and innovative programme being run in experimental form in the northern areas of Pakistan. It aims to:

- train teachers to give up some of the traditional practices prevalent in rural primary schools, and
- persuade teachers to adopt a new approach so that emphasis is shifted from the teacher to the pupil as the centre of the teaching-learning process.

The FBT programme was started in 1984 in and around Gilgit. Initiated by the Aga Khan Central Board of Education under the aegis of the Aga Khan Education Service, it is currently co-sponsored by the government Department of Education. This project was aimed at establishing a system of in-school teacher training based on the PTC (Conventional) syllabus. Trainees are required to sit the PTC examination at the end of one year's training. The most distinctive feature of this programme has been its relationship with real-life situations through on-the-job training. The planners of this programme were particularly concerned that the training should be imparted in a situation which is very close to the actual work of the teachers, and that the teachers should be able to put the concepts into practice in their class teaching. It was expected that this programme would ensure proper understanding of the concepts, as well as bringing about desirable changes in the classroom behaviour of the teacher. (Farooq, 1988)

Teacher training through distance education

For quantitative expansion and qualitative improvement of teacher education Allama Iqbal Open University, Islamabad has launched various programmes of teacher training through distance education. These include PTOC (Primary Teachers' Orientation Course); PTC; CT and B Ed teacher education programmes. The PTC programme of Allama Iqbal Open University is very popular among the untrained teachers working in primary schools in different parts of the country. The programme is popular because teachers are not required to leave their schools, and they can easily afford the training expenses. Thousands of teachers are enrolled each semester.

Apart from the correspondence component of the courses, a practical workshop and practice teaching are compulsory for the successful

completion of each programme. Each training programme comprises the following components (Farooq, 1988):

1 Textual material (Correspondence lessons)
2 Lessons based on radio programmes
3 Guidance by the part-time tutor
4 Get-together in study centres
5 Under the guidance of the part-time tutor - practical workshop and practice teaching.

Allama Iqbal Open University has introduced a full-fledged PTC course, comprising eight half credit courses and six weeks' practical training.

It is interesting to note that these courses have been designed in accordance with the PTC programme of traditional training institutions, with the exception of the course on 'Community Development'. The distinctive feature of this programme will be the development of the textual material by the university. The university will invite experts to write teaching units designed for 'self study'.

Analysis of teacher training programmes

In this section the results of existing evaluations of the pre-service teacher training programmes are summarised. Through available documents and interviews we identify basic differences of emphasis in existing programmes. From interview data (when it is appropriate) we point out the gap between the stated objectives for the course and what actually is implemented.

There are no evaluations of in-service training programmes, and because they can vary considerably, no attempt has been made to comment on the success or failure of individual programmess.

Conventional pre-service training

The Curriculum Research and Development Centre in Lahore conducted an in-depth analysis of the PTC curriculum. The purpose of the evaluation was to identify the weaknesses and strengths of the existing curriculum to provide a basis for its improvement. The study was based on the opinions of teacher trainers and therefore reflects the views of those who oversee the actual use of the curriculum in training institutions. The study concludes:

> The student teacher did not understand the intellectual growth pattern of the child, the relationship between learning and motivation, techniques of individual and group counselling and the importance of teacher-parent relationships.

Criticism emphasised the inability of students to grasp fully the content of materials used in this conventional model. The study recommended that the curriculum of teacher education should be revised accordingly and the emphasis should be shifted from rote learning to activity-oriented learning.

From the goals and objectives, from the weightage assigned to various kinds of course work, and from the priority given to implementing the

objectives, we can determine different levels of importance accorded different components of the conventional model. From the goals and objectives, for example, it is clear that content knowledge has a more important place in training programmes than developing the skills of application, even though a proportion of time is given over to practical courses. The imbalance becomes even more obvious when we look at the actual amount of time that a student teacher spends in practice teaching. In most institutes this is usually much lower than is called for in the curriculum, and in some institutes, trainees may have no opportunity to practice teaching at all.

Examination papers collected from pre-service and in-service teacher training institutions at Abbotabad, Peshawar, Quetta, Karachi, and Lahore showed that only memorisation of text content was required of students. Many activities required in the PTC curriculum are never subjected to any sort of examination or evaluation. As a result trainers do not feel it necessary to carry out such activities, even though these are essential for the achievement of the overall objectives of the training programme.

If the training objectives are to be realised, experience in Pakistan has shown that relevant content and teaching methods must appear in textual materials and exams or they will not be implemented. In practice, trainers only carry out those learning activities that enhance a student's ability to do well in achievement tests. Perhaps it is because practical courses, at present, do not appear in specific form in final examinations that trainers and students alike fail to give them high priority. Even objectives which everyone considers of utmost importance are neglected if specific content is not written for them. For example, the teacher training textbook on *Principles of Education and Methods of Teaching* does not contain material for three main objectives of the training programme: inculcating Islamic values and practices in student teachers; developing respect for teaching as a profession; and developing an appreciation for both theoretical and practical hands-on ways of learning. One problem may be that these objectives are not well defined or well stated, and that, as yet, there is little consensus on what would constitute acceptable evidence that these objectives have been fulfilled.

Similarly, equipment and services which are needed if certain learning activities are to be carried out, may not be available in training centres, and they are most certainly not available in primary schools in most of Pakistan. Even the 'practical' methods courses are learned in a theoretical way through memorisation of material in textbooks and not through hands-on experience.

The same is true of teaching practice. The PTC programme allocates six weeks to teaching practice - short-term two weeks, and long-term four weeks. But rarely are even four weeks spent in this activity. There are several reasons for this. Firstly, most of the teacher training institutions observe summer vacations for more than ten weeks. These vacations are over and above the stipulated two weeks winter and spring breaks that appear in the course outline. The training course must be cut somewhere and it is most convenient to cut the practice teaching component. Secondly, training institutes rarely have access to sufficient classrooms to accommodate the large numbers of students requiring practice teaching.

Thirdly, it is taken for granted that the student teacher will be given guidance by a supervisor as well as a classroom teacher who will be present during the student's practice teaching. It is stated in the curriculum document that the student teacher will observe at least four demonstration lessons given by competent classroom teachers/supervisors, followed by group discussion. Supervisors are required to observe at least one fourth of the lessons delivered by the trainees, but because of insufficient staff, this practice has been abandoned in many training institutes. Student teachers, if they are given practice at all, are thrust into an unsupervised practice experience for which they are not mentally or professionally prepared.

When, in practice, some supervisors tend to take rather easily the responsibility of guiding students, the unintended lesson that the student learns from this experience is that professionals do not take their responsibilities seriously. A potential consequence is that when students become teachers, they will also feel it is not important to carry out their duties diligently.

These are just a few examples where actual training deviates from what is intended in the objectives of the programme. Too often what is expected in theory conflicts with what is possible in reality, and when this happens reality dictates the course of implementation.

Another survey of teacher training was conducted by the Overseas Development Administration (ODA) sponsored by the British Council. The team came up with very interesting findings on issues connected with teacher education, staffing and curriculum for teacher education, and resources allocated for teacher training institutions. Planning was found to be weak with no clear targets for teacher supply. It was found that Teachers' Colleges were suffering severe staffing problems in terms of relevant experiences of their staff.

The team observed that in Baluchistan there was an acute problem in attracting girls into teaching with the result that there was a severe shortage of female teachers.

Teaching practice was found to be ineffective. The reasons for this were not clear but the survey team was of the opinion that the problem lay with the planning and management of teaching practice.

Field-based training

An evaluation study was carried out at the end of the first Field-Based Training (FBT) course by a team of researchers from the National Institute of Psychology. The sample included 23 schools. The researchers evaluated matched groups of teachers: teachers trained under the FBT programme, and those trained under the conventional Primary Teaching Certificate programme. The latter group included two subgroups: those who received PTC training as well as a refresher training course; and those who received PTC training but did not attend a refresher training course.

In order to evaluate the effectiveness of the respective programmes the researchers used observation techniques to determine differences in the behaviour of teachers in the three groups, and in the behaviour of pupils of different ability levels being taught by each type of teacher. In addition, they sought through interviews to determine differences in the background

and perceptions of the three groups of teachers. The researchers looked at the physical condition of classrooms, but did not relate these conditions to the effectiveness of the programmes.

The study concluded that FBT teachers delivered lectures which were well planned and structured. They made skilful use of the blackboard; they knew how to ask questions of their pupils. They stimulated pupil interest through introductory activities and by developing indigenous aids so that the concepts would be more easily understood by the children. Analysis of teachers' performance showed them to be consistently similar in various subjects, with the exception that FBT teachers were generally better teachers of Urdu and Mathematics. In Science, they did no better than PTC teachers. The interviews showed FBT teachers to be somewhat more communicative and articulate. They reported more staff meetings and private conversations concerned with educational problems, including the problem of discipline. FBT teachers also showed a more positive attitude towards the teaching profession personally as well as a greater interest in improving the learning of children. (Chowdhri, Shaheen and Abbass Sohail, 1987)

The evaluation pointed out the critical differences between the Field-Based Training and other programmes. From observation, the evaluators concluded that the FBT programme has successfully improved the quality of teaching, according to its objectives. The programme assumes that more interactive relationships between pupils and teachers will produce better comprehension and better developed skills. It has succeeded in changing certain aspects of teachers' instructional styles, but when measured by achievement scores there was no significant difference from the conventional programmes. However, testing in Pakistan normally assesses content knowledge, and therefore may not be a good measure of the effectiveness of the FBT programme, which claims other types of results.

One of the officials connected with the FBT programme commented that he is not sure that teaching styles have really changed; he noted that teachers may revert to their old teaching styles when they are alone and not being observed for evaluation. These traditional styles are easier to implement under the conditions which prevail in many schools.

The ODA Survey on Teacher Training found that since its inception in 1984 the Agha Khan Education Service had trained 180 teachers. Currently a further 80 teachers are enrolled in the programme, drawn from both the Agha Khan Education Service and State Schools in the Northern Areas.

Distance education

The Distance Education programme has not been evaluated, but some of its distinctive differences from other programmes are immediately visible. It attracts students who might not normally have an opportunity for teacher training. Some are too busy with regular teaching duties to take full-time study leave to improve their credentials. Among these are untrained private school teachers who, when they complete the course, are eligible for higher pay and more secure jobs in government service. Women who have

difficulty leaving their families for long periods of time are also attracted to distance education.

Though the course basically follows the conventional PTC curriculum, and is therefore subject to the same limitations, it is, nonetheless, more effective at implementing the practice teaching components. In a final practical exam, students must show their capacity to teach using instructional materials they have made themselves. Despite this emphasis on the practical, however, the course fails to prepare students for the variety of classroom conditions they will face in real life. The assumption of the training is that each classroom will contain 20 to 40 pupils, rather than multi-grades, or larger or smaller groups of pupils. In explaining this approach, one official commented that the programme trains teachers for what is considered to be an ideal teaching situation and expects teachers to modify what they have learned to suit the conditions in their individual schools. He believes that training for unacceptable conditions will encourage teachers to use unsatisfactory teaching methods when they should be striving to employ the best methods possible.

When working properly, the Distance Education programme successfully compensates for the dispersal of its student body by providing considerable opportunity for individual attention from tutors. Students have the option to work on their own as much as they wish, or to seek help from radio programmes, tutors and centres where they can meet other students and find the answers to their questions. The strongest aspect of the programme is this ability to adapt to the special needs of its students, and to produce qualified teachers in a short time with competencies probably equal to those who take longer and less practical conventional courses. The only problem is that students living in remote areas have no easy access to their study centres. The attendance at study centres is usually 20-25 per cent in the first three tutorial meetings. Remaining tutorial meetings are usually attended by 5-10 per cent of students.

The Allama Iqbal Open University also contributed significantly to the training of teachers by means of distance learning techniques. Allama Iqbal Open University prepares candidates for PTC, CT, and B Ed. In 1986-87, 4913 PTC teachers were trained in this way. At present, formal external evaluation of the University's programme is not available. Neverthlesss, the potential of the Allama Iqbal Open University to meet the problems of teacher education, particularly in remote areas, cannot be over-estimated.

Financing teacher education

Teacher education is one sub-sector that demonstrates the huge gap between official policy pronouncements and priority thrusts and actual implementation and commitment. Over 33 years, from the First Plan to the end of the Sixth Plan, the shortfall for teacher education amounted to 46 per cent between the total allocation of Rs 598 million and actual expenditure of Rs 273 million. In the First Plan, the allocation was Rs 23.3 million, but expenditure Rs 4.9 million; in the Second Plan, there was a small excess of one million Rs; in the Third Plan, the shortfall was 50 per cent; in the Non-Plan Period, there was small shortfall of Rs 50,000; in the

Fifth Plan, a shortfall of Rs 90 million; and in the Sixth Plan, a shortfall of almost 50 per cent.

Conclusions

The emerging needs of Pakistani society require a revolution in the field of teacher education. The teacher occupies a pivotal position in the educational system. It has been realised by teacher educators that one year training is not sufficient to develop insight, interest and maturity in educational theory and practice. In a crowded programme of such a short duration, the trainee is not in a position to assimilate the basic concepts of education and develop a mastery over them. This is why a three year B Ed programme was instituted on an experimental basis at the Institute of Education and Research, Gomal University, Dera Ismail Khan. It was later discontinued for unknown reasons and relocated at Government College of Education for Science, Township, Lahore and Federal College of Education, Islamabad. If this programme proves to be successful the training period can be extended to four years.

The four year training programme would help to rectify many of the defects in existing one year independent training colleges. During the past two decades or so the purposes of secondary education have been widened and deepened in order to meet the requirements of developing Pakistani society. New subjects have been added to the curriculum and the content of existing subjects has been modified to a great extent. Teacher training colleges have found it increasingly difficult to adapt their curriculum to the changing needs of education in general, and secondary education in particular. Their pedagogical programmes have already become over-crowded and little is being accomplished by way of improving the content competence and general knowledge background of the prospective teacher.

Even if we assume that a BA/BSc degree in a specific subject gives adequate competence, we must not overlook the fact that not all our secondary school teachers have a degree in the subject or subjects they teach. In a four year college programme, however, it is possible for the prospective teacher to major in two school subjects. The four year programme could also become useful in providing integrated subject matter in certain areas such as Social Studies and General Science.

In addition to the need for content specialisation in two school subjects, there is a need for the teacher to acquire an adequate quantum of General Education. A teacher who is charged with the sacred responsibility of guiding the physical, mental, social and moral development of children should have a substantial amount of General Education. It is highly desirable that the teacher obtains a broad-based General Education in socio-economic, cultural and scientific fields, so that he may be able to understand the implication of these areas of human knowledge for secondary education.

As we are not in a position to obtain graduate teachers for our elementary schools, the training programme for elementary teachers should be extended from one year to two or more years, on similar lines to secondary teacher training.

There is a definite need for a large number of in-service institutions and centres throughout the country to give teachers insight into the latest changes in curriculum, methodology and aids for improving instruction. A comprehensive in-service training programme of at least eight weeks' duration is the minimum needed to convince teachers of the value and benefits of innovations and new techniques and to orientate teachers about factors facilitating change.

The tremendous increase in scientific knowledge, and the rapidity with which new knowledge is added to or has superseded the old, has made it evident that existing educational programmes at all levels must be reorganised to meet the fast-changing socio-economic needs and goals of society.

Recommendations

1 Keeping in view the importance of teacher training, especially for elementary level, a separate teacher education cadre should be created in the provinces on the lines of the school cadre and college cadre. The appointment of teacher educators should be according to the demand in different subjects and the teacher educator should hold a Master's degree in content areas as well as in Education. The practice of transferring headmasters/headmistresses as instructors should be discontinued.

2 Teacher educators should have extensive training in research methods and measurement and evaluation techniques. Short courses should be arranged for those who lack training in these areas.

3 The curriculum and textbooks of teacher education programmes should be evaluated and necessary changes introduced, bearing in mind the needs of working teachers.

4 Teacher educators need to keep abreast of the changes and developments taking place in the field of education. For this purpose in-service training courses for teacher educators and supervisors should be arranged.

5 School supervisors are the best judges of teachers. They should be consulted in identifying the areas/subjects where in-service training is needed. Education Extension Centres should be made responsible for this. These centres should have their regional centres at each divisional headquarter. Need assessment studies should be properly funded.

6 The duration of practice teaching should be extended as much as possible. It should take place under the strict supervision of faculty supervisor and classroom teacher. During this time prospective teachers should be encouraged and trained to prepare their own audio-visual aids.

7 Almost all the countries of the Asian region have extended the duration of various teacher training programmes. In Pakistan, these should be extended gradually according to needs and resources.

8 Courses on Classroom Management and School Organisation, Child Development and Counselling, Principles of Education and Methods of Teaching, and Education and Society should be revised/added to, so

that important aspects of teacher training are given proper consideration.

9 To examine the weaknesses or strengths of each teacher training programme, follow-up studies need to be designed and properly funded. Aid agencies should be approached for funding comparative studies of teacher education at international level especially in the Asian region.

10 Future studies should be aimed at comparing the formal system of teacher training with that of the Agha Khan Field-Based Teacher Training Programme and the Teacher Training through Distance Education Programme of Allama Iqbal Open University, Islamabad.

11 In future, studies should be designed and conducted on the evaluation of the existing teacher education curriculum, especially the core courses, elective areas offered, the balance between subject matter-centered and pedagogical courses, and the relationship between and comparison of internal and external modes of evaluation.

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Tables

Table 2: Number of schools in Pakistan

LEVEL	1947	1960	1978	1988
Primary Schools (I - V)	8,413	17,900	55,502	114,137
Middle Schools (I - VIII	2,190	2,374	5,379	10,209
High Schools (V - X)	408	1,069	3,537	5,530
Teacher Education:				
(a) For Primary Schools	-	44	69	87
(b) For High Schools	-	9	14	17

Source: Action Plan for Implementation Programme 1983-88

Table 3: Enrolment of students

LEVEL	1947	1960	1978	1988
Primary (I - V)	770,000	1,950,000	5,455,000	12,354,000
Secondary (V - X)	21,000	53,700	189,200	342,700
Teacher Education:				
(a) For Primary Schools	-	4,466	20,000	21,000
b) For High Schools	-	1,050	4,500	4,500

Source: Action Plan for Implementation Programme 1983-88

Table 4: Unit cost for teacher education

TYPE OF INSTITUTION	COST PER STUDENT
Elementary Teachers' Colleges	Rs 2,572
Colleges of Education (Male)	Rs 8,173
Colleges of Education (Female)	Rs 4,418
Colleges of Education (Co-Ed)	Rs 4,318
Technical Teachers' Colleges (Male)	Rs 14,628

Source: Survey of Teacher Training in Pakistan, ODA Report, 1988

4 SRI LANKA

Introduction

Sri Lanka has a long history of teacher training dating back to the mid-nineteenth century. The major concern of the authorities was to ensure an adequate supply of competent people and to train them in the best possible way. Teacher training in Sri Lanka has progressed with the passage of time, with the ever-increasing need to provide a qualified and trained teacher-cadre for the school system. Accordingly, new teacher training programmes have been designed and are being implemented, adding new dimensions to the concept of 'teacher education'.

The current teacher education programmes in Sri Lanka can be broadly categorised under the following headings:

1 ***In-service teacher education***
   Long-term institutional
   Long-term non-institutional
   Short-term non-institutional
2 ***Pre-service teacher education***
   Long-term institutional

The above programmes are carried out by the Universities, Teachers Colleges, Colleges of Education, Open University and by several other departments which come under the umbrella of the National Institute of Education (NIE).

[For departments under the NIE umbrella, and quantitative information on initial teacher training, see Tables 1 to 7.]

In-service teacher education

Long-term institutional

Universities

The Faculty of Education in the University of Colombo, and the Departments of Education in the Universities of Peradeniya and Jaffna offer one year full-time and two year part-time courses leading to a postgraduate Diploma in Education. Graduate teachers with at least one year's teaching experience in schools are admitted to full-time courses, on the basis of an entrance examination. Full-pay study leave is granted to these teachers.

Part-time courses are conducted during weekends and school vacations. The Diploma is awarded on the basis of a written examination, practical teaching and one long essay.

Teachers' Colleges

There are sixteen Teachers' Colleges which provide two year teacher training programmes in nineteen subject areas of the school curriculum. Non-graduate teachers with GCE (OL/AL) qualifications and at least one year's teaching experience are selected on the basis of in-service seniority. Once selected, they are given two years' full-pay study leave. The Trained Teachers' Certificate is awarded on successful completion of the course, including practical teaching, internal assessment, as well as a written examination conducted by the Department of Examinations.

Department of English Education

This Department (formerly known as the Higher Institute of English Education) is now under the NIE umbrella. It also conducts a one year full-time Diploma Course in English Language Teaching for non-graduate trained teachers.

Long-term non-institutional

Department of Teacher Education

This Department conducts a postgraduate Diploma in Education (PGDE) for graduates in the teaching service. It is a two year part-time correspondence course, supported mainly by print media, with lectures, discussions and seminars held regularly at regional centres. The final certification is determined by the NIE on the results of internal assessment, practical teaching and a written examination.

Department of English Education

In-service courses in English Language Teaching are organised by this department for the benefit of English teachers. It offers a two-year part time Professional In-service English Teacher Training (PINSETT) course to untrained English teachers with GCE (OL/AL) qualifications. Lectures, discussions and seminars are held at a number of regional centres during weekends and vacations. The English Trained Teachers' Certificate is awarded after a written examination, assessment of coursework and practical teaching.

Department of Distance Education

This department is mainly concerned with untrained non-graduate teachers and trainee teachers, the latter numbering about 35,000. Distance teacher training has been introduced by the education authorities, supported by SIDA aid, as an alternative way to deal with the present backlog of untrained teachers. Courses have five major components: printed material (in modules) and other media; written assignments; contact sessions; local resource centres; practical teaching. The duration of each course is three years. A system of continuous assessment, together with a written

examination, form the basis of the final Trained Teachers' Certificate, which is awarded after successful completion of the course.

Open University

The University of the Air conducts a Distance Teacher Education course for graduate teachers leading to a Diploma in Education. This is a correspondence course utilising printed material and other media, and supported by contact sessions held periodically at regional centres. The practical teaching sessions are handled by the field staff attached to the Open University. The certificate is awarded on the successful completion of coursework and a final examination.

Short-term non-institutional

This area of teacher training, now perceived as 'continuing education', covers all types of short-term courses for teachers at all levels. These courses fulfil the need to update the teachers' subject knowledge and teaching methodology. They are conducted at regional level by experienced practising teachers designated as 'master teachers' or in-service advisers. Such teachers are specially trained for this role by the former Curriculum Development Centre (now functioning under the NIE).

The courses are of short duration (one to three days/weeks/months) and are planned on a regular basis throughout the year. A specified number of hours of attendance at in-service courses is a requisite for teachers to qualify for their efficiency bar. The Ministry of Education and Higher Education also runs short-term in-service courses, both on its own and in collaboration with the respective departments of the NIE.

The Universities also conduct short in-service teacher training programmes, though not on a regular basis.

Pre-service teacher education

Long-term institutional

The current system of pre-service teacher training in Sri Lanka began as a result of a policy decision by the Ministry of Education to ensure an adequate supply of well-trained and qualified teachers to the school system. Consequently, seven Colleges of Education were established from 1985.

The National Diploma in Teaching is a three year full-time course, of which two years are institution-based and one year a school-based internship. Prospective students must have GCE (AL) and must also pass an entrance exmination. At college, trainee teachers have to be fully residential and are given a monthly stipend to cover their board and lodging expenses. The Diploma is awarded on internal assessment, a written examination and successful completion of the internship period.

All new recruits to the teaching profession, both graduates and non-graduates, are given three weeks of pre-service training to make them more professionally oriented as teachers, before they assume duties in school. At present there is no preservice training of graduates other than the three weeks' short induction course.

Successful innovations in teacher training

The growing demand for education, followed by the expansion of educational opportunities for the masses, resulted in the recruitment of more and more untrained teachers to the school system. The quality of teaching suffered as a consequence. The training of all these new recruits within a short period of time *and* in the face of financial constraints has become a perennial problem to the government of Sri Lanka. Educationists stressed that immediate remedial action had to be taken to prevent further deterioration in both the quality and the status of teachers.

The Educational Proposals in the 1981 White Paper recommended far-reaching reforms to improve the existing education system. They also offered a new package to the teaching profession in the form of higher salaries, promotions and other incentives, all aimed at enhancing the status of the teacher. In its wake, two major innovations in teacher training were introduced, advocating different approaches to the selection of trainee teachers and to the course content of teacher education.

These two innovations are the Colleges of Education and Distance Education modes of training. The former advocates a pre-service approach and the latter an in-service approach to the training of primary and secondary teachers at the basic education level. These two modes aimed to develop mechanisms to attract competent people to the teaching profession, and then to retain them. They also aimed to enhance the status of the teacher, thus ensuring an adequate supply of well-trained, qualified teachers who would be an asset to the system.

Colleges of Education

The strategy underlying the Colleges of Education is to bring capable and well-educated young people into the teaching profession. The training emphasises a diversified curriculum, covering the following areas:

1 General education
2 Area of specialisation
3 Pedagogical knowledge and practice
4 Co-curricular (unscheduled) activities

This curriculum aims to cover the objectives of the pre-service teacher education programme, supported by evaluation procedures to test the achievement of these objectives. Evaluation comprises internal as well as external assessment, and different weighting is given for the various activities in internal assessment. One of the commendable features of this programme is the activities organised to bring about community awareness among prospective teachers.

Distance education

Distance education offers an alternative structure to meet the training requirements of GCE (OL/AL) qualified teachers who are already in the teaching profession. The distance mode uses the module as core learning material, placing greater emphasis on subject matter and on the teacher as an individual learner. As the teachers already have some pedagogical

experience, they are expected to improve their teaching skills as they proceed with the training.

Teachers are also required to attend contact sessions during weekends and vacations. Specially trained local tutors are attached to local resource centres to conduct these sessions and to supervise the school-based teaching practice of student-teachers. Student progress is recorded through a system of continuous assessment. Internal assessment of coursework and the practical teaching component, together with an external examination, form the final evaluation scheme of each course of training.

Implementing the innovations

Colleges of Education

In 1985 six Colleges were opened, one each for Science, Mathematics, English, Physical Education and Religion. In 1986, another College was established for Science, Mathematics, Primary Education and Home Science. All arrangements have been completed to open another new College for Primary Education, Mathematics and Science in 1992, initially with 250 students. Two more Colleges are to be opened in the northern and eastern parts of Sri Lanka.

The total enrolment of student teachers in the seven Colleges of Education for the period 1989-1991 is 2976. The first students who completed training under this programme passed out in 1988. Three student intakes have completed the programme. However, as the Colleges are not operating at their full capacity, the provision of places at the Colleges still falls short of the target. The reason for this under-utilisation is that both construction and renovations undertaken in the Colleges are still being completed. Nevertheless, every effort is being made to increase intake to maximum capacity - 250 students per year for every College of Education. (See Table 1.)

Distance education

The Department of Distance Education was started in 1981 as the Distance Education Unit under the Ministry of Education. To begin with, teachers were enrolled for two courses: Primary Education; and Mathematics and Science Combined Course. The Unit now functions under the NIE and, since 1984, has expanded its horizons. The on-going programme for untrained non-graduate teachers comprises three courses: Primary Education; Science; and Mathematics. Seven intakes of students have been admitted to these courses. (See Table 2.)

The Department of Distance Education has, during this period, produced 9429 trained teachers. This means that 77 per cent of those enrolled have qualified for the final Trained Teachers' Certificate after passing the stipulated examinations, and that of those sitting the examinations, an average of 91 per cent have been successful (*source*: Department of Distance Education, NIE). In 1991, this Department commenced another training scheme called the Teacher Education Area Based Programme (TEA) to cater for the training requirements of 32,000 teachers who had been recruited on a trainee basis. Fifteen new training

courses based on subject areas in the school curriculum have been developed for the benefit of these trainee-teachers. Another intake of 5000 trainee teachers were awaiting enrolment for courses in 1992.

Evaluative assessment of the innovations

A research study undertaken in 1988 by the Research Division of NIE in collaboration with the BRIDGES Project, devoted itself to an objective assessment of the extent to which the existing teacher training programmes in Sri Lanka were able to improve the quality of its teachers and at what costs. This study was confined to the primary teacher training programmes in the Teachers' Colleges, Colleges of Education and the Department of Distance Education. The findings of this research study, though not final and conclusive, offer valuable information regarding the effectiveness of the programmes.

1 It was found that pre-service training has a positive effect on the learning of subject matter knowledge and teaching skills, over the in-service approaches (Distance Education and Teachers' Colleges). At the beginning, the College of Education candidates score lower than their counterparts in teaching skills, but they gradually improve their performance as they progress through the programme. The marked achievement of the Colleges of Education are due to the following factors:
(a) The high level of subject matter knowledge may be attributed to the selection policy adopted in which only GCE (A/L) qualified students are admitted to the programme.
(b) The increased level of teaching performance shown towards the end of the programme could well be the result of close supervision with feedback in the classroom in the final year.

2 In written assignments, teaching skills and pedagogical knowledge distance education students seem to show a higher level of performance than their counterparts. This may well be because:
(a) The distance education programme provides the opportunity of practising while learning, allows for frequent interaction with tutors/other practising teachers, and constant monitoring.
(b) As written assignments form a major component of the distance programme, these candidates are at a relative advantage over the others.

3 In the use of teaching strategies (such as encouraging active participation of pupils in the teaching-learning process, close teacher-pupil interaction, careful monitoring of student progress during class, effective use of instructional materials) Colleges of Education and distance education candidates scored higher than Teachers' Colleges. This performance is particularly creditable for the Colleges of Education candidates considering that they have less experience in actual classroom teaching. This may be due to:
(a) The quality of training received and constant feedback on performance.

(b) The implementation of a newer and more progressive curriculum emphasising the application of teaching techniques and methods derived from recent research.

4 Teachers' Colleges are handicapped for the following reasons:
(a) The curriculum is traditional and outdated.
(b) They lack the resources to acquire skills in modern teaching techniques.
(c) They suffer from a shortage of well-qualified and trained academic staff.
Consequently, TC candidates are at a relative disadvantage compared with their counterparts, who are exposed to effective and modern techniques of teaching, under specially trained, qualified academic staff.

5 Finally, in terms of costs, the study reveals that Colleges of Education are 8.69 times (2243 US Dollars) more expensive than distance education. Teachers Colleges are 6.15 times (1588 US Dollars) more expensive than distance education (258 dollars). This is the cost per cycle.

Problems and issues

The study of the Education and Training sector in Sri Lanka (1988) undertaken by the Asian Development Bank under its Technical Assistance programme highlighted certain issues in relation to initial teacher training in Sri Lanka. They are as follows:

1 There is a backlog of untrained teachers in the system which needs to be cleared. At present, there are 28,000 untrained graduate teachers and 53,752 untrained non-graduate teachers. The numbers continue to grow as untrained graduates and non-graduates are still being recruited.
2 Adequate facilities for in-service training programmes are lacking. This is aggravated by the shortage of adequately trained personnel in areas such as curriculum design, development and evaluation, and the shortage of well-trained teacher educators.
3 The curriculum in Teachers' Colleges is traditional and outdated, with too much emphasis on pedagogical and theoretical learning. This has resulted in inadequate responsiveness to the needs of the school situation.
4 Teacher education is imparted in institutions which are completely isolated from other institutions. The lack of interaction with people from other professions has aggravated inbreeding in the teaching profession.
5 The existing facilities are under-utilised. In Colleges of Education, the capacity exists for 500 students per College. Yet, in all seven Colleges of Education only 700 students were admitted in 1986, as against the stipulated figure of 1750. Even in 1991, the number admitted was far below the anticipated figure of 1098.

6 The report acknowledged the fact that the Department of Distance Education bears promise for expediting the training of the backlog of untrained teachers (page 65, volume 2). Yet it expressed concern over the fact that admissions to the distance education courses are declining (Table A. 41, volume 4).
7 There are no facilities to provide pre-service training to university graduates who wish to join the teaching profession.
8 Analysis of the trends in the growth rate of teachers during the decade 1978-1988 revealed that there is no link between the growth in the number of schools opened or closed, students admitted and teachers recruited. This factor prevents a clear perception of the problem of untrained teachers in drawing up a strategy.
9 The existing facilities for clearing the backlog of untrained graduate teachers are far from satisfactory. Unless the existing arrangements are expanded or new ones established, it may be difficult to wipe out the existing backlog before the year 1999. Even then it may not be possible to complete their training because every year new untrained graduate teachers are recruited.

Conclusion

Of all these issues, our major concern is how both pre-service and in-service teacher education facilities and programmes can be strengthened in order to clear the present backlog of teachers and also to ensure the recruitment of trained teachers from pre-service teacher-training institutions in the shortest possible time. This has to be achieved without lowering the quality and effectiveness of both the teacher education programmes and the education system.

Tables

Table 1: Quantitative information pertaining to teacher training in Sri Lanka

A NUMBER OF UNTRAINED TEACHERS

Non-graduates	53,752
Graduates	28,000
Total	81,752

B NUMBER OF TEACHERS CURRENTLY UNDERGOING IN-SERVICE TRAINING (LONG-TERM COURSES)

Institution	*Non-graduates*	*Graduates*
Teachers' Colleges	5758	-
Distance Education:		
(i) Universities	8306	3527
(ii) NIE	32,000	10,000
Total	46,064	13,527

C NUMBER OF PROSPECTIVE TEACHERS UNDERGOING PRE-SERVICE TRAINING

Colleges of Education	2184

Table 2: Total enrolments in Colleges of Education (1985-1991)

COLLEGE	1985	1986	1987	1988	1989	1990	1991
MAHAWELI	181	184	160	--	165	234	231
SIYANE	123	154	204	--	158	202	250
HAPITIGAMA	182	65	191	--	136	232	180
PASDUHRATA	158	120	146	--	91	243	236
NILWALA	--	77	72	--	117	45	98
UVA	71	57	60	--	66	59	65
SARIPUTTA	--	66	--	--	59	71	38
Total	715	723	833	--	792	1086	1098

(Source: Colleges of Education Division - Ministry of Education and Higher Education)

Table 3: Enrolments and examination performance: Distance education (1984-1991)

1 CLIENTELE: UNTRAINED NON-GRADUATE TEACHERS

Year	Enrolled	Sat exam	Passed exam	Passed/ enrolled	Passed/ sat exam
1984	4666	3989	3828	82%	96%
1985	4295	3882	3311	77%	92%
1986	--	--	--	--	--
1987	3216	2504	2290	71%	91%
1988	2324	--	--	--	--
1989	1614	--	--	--	--
1990	3055	--	--	--	--
1991	1313	--	--	--	--

2 CLIENTELE: TRAINEE TEACHERS (TEA PROGRAMME)

1991	32,000	--	--	--	--

(*Source: Department of Distance Education, NIE*)

Table 4: Total direct cost per student by type of institution and source of funds (in Sri Lankan rupees and US dollars)

	Teachers' Colleges		*Colleges of Education*		*Distance Education*	
	Rupees	US $	Rupees	US $	Rupees	US $
OVERALL	10,929	363	29,161	972	4160	139
TO SPONSOR	7230	241	23,658	789	2787	93
TO STUDENT	3699	123	5503	183	1374	46

Table 5: Net direct costs per student by type of institution and source of funds (in Sri Lankan rupees and US dollars)

	Teachers' Colleges		*Colleges of Education*		*Distance Education*	
	Rupees	US $	Rupees	US $	Rupees	US $
OVERALL	24,753	825	34,961	1165	4024	134
TO SPONSOR	21,054	702	29,458	982	2650	88
TO STUDENT	10,126	338	298	10	1511	,50

(Source - Tables 4 &5: BRIDGES Sri Lankan Teaching Education Study, 1988 Research Division, NIE)

Table 6: Capital and recurrent expenditures per student in 1988 by type of institution (in US dollars)

	Teachers' Colleges		*Colleges of Education*		*Distance Education*	
	US $	%	US $	%	US $	%
CAPITAL	69	28%	446	40%	08	9%
Buildings	42	17%	317	28%	05	6%
Furniture & Equipment	27	11%	129	12%	03	3%
RECURRENT	172	71%	675	60%	85	91%
Salaries/Benefits to						
(i) Lecturers/ Instructors	71	29%	285	25%	42	45%
(ii) Admin/ Supt. staff	55	23%	251	22%	10	10%
Other	46	19%	139	12%	33	36%
Total cost/ student	241	99%	1121	100%	93	100%

(*Source*: *BRIDGES Sri Lankan Teacher Education Study, 1988 Research Division, NIE)*

Table 7: Funds allocated for teacher-training at the basic education level, 1982-1991 (in millions - slrs)

	Institution	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
A	MIN. OF EDUCATION Teachers' Colleges/ Colleges of Education *	31.3	32.8	55.6	89.4	287.9	361.2	201 .0	213.4	187. 0	177.6
B	NATIONAL INSTITUTE OF EDUCATION	-	-	-	n.a	n.a	n.a	n.a	25.9	27.1	23.9
C	UNIVERSITIES										
	Univ. of Colombo Faculty of Education **	1.2	1.6	1.7	1.7	1.8	1.8	2.1	2.8	4.4	5.1
	Univ. of Peradeniya Dept. of Education **	-	-	-	-	-	-	-	-	n.a	1.6
	Open Univ.	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
	Univ. of Jaffna	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a

* Short -term In-service Training Courses
** Recurrent only

5 OVERVIEW: BEATRICE AVALOS

Introduction

No analysis of the educational problems of a country can leave out the crucial issues of the provision of teachers, the quality of their work and, hence, the quality of their training. Over time, however, there have been changes of emphasis about the importance of training for improving the quality of teaching and learning. Without attempting to examine here the rationale for such shifts of emphasis, it could be suggested that they have much less to do with any careful analysis of the *effects* of training on teacher performance, than with the *costs* of quality training for teachers in the context of poor developing countries. Consideration of issues relating to quality of training also has to take account of the difficulties of attracting the right candidates to the teaching profession because of poor salary and working conditions.

These factors highlight the two poles around which issues of teacher education have to be examined. On the one hand, there is the teacher education process itself and what is needed to make it qualitatively effective. On the other hand, there is the reality of the world outside training institutions including the level of education of the society concerned, the motivation of young people to enter the teaching profession and the conditions that could make it an attractive profession. If one talks of educating a teacher to become a 'reflective practitioner', one needs to consider that the process may not be all that easy if the teacher trainee has come from a system of education that has not emphasised reflective thinking, if the teacher educators are themselves used to a fairly authoritarian mode of teaching and are weak in the knowledge and understanding of the subjects they have to teach, if the resources of the institution (books, aids) are inadequate and if the contacts with the schools are not well established. Changes on all these fronts are obviously difficult and costly, especially if the teaching conditions are such that capable students will not consider entering training because of what awaits them at the end of the road.

The purpose of the South Asian colloquium organised by the Commonwealth Secretariat is to examine ways in which some of these constraining factors can be overcome in the process of initial teacher education in Bangladesh, India, Pakistan and Sri Lanka. How are these

countries dealing with some of the problems that beset teacher education? What changes are being discussed or have been introduced that have potential for improving teacher education? What can the participating countries learn from each other?

Before discussing the experiences of each of the four countries, it will be useful to set out the parameters within which the issues of teacher education or teacher training will be placed. In general, teacher education is seen broadly as a life-long process by which teachers endeavour to become more proficient in performing the task of educating children. For the purposes of this colloquium, we are considering teacher training (as part of teacher education) for the primary or basic level of the educational system. In this sense, teacher training is seen as the process of providing structured preparation for teaching, not only to candidates who have no pre-service experience, but also to in-service teachers who have had no formal training for the job.

The aims of initial teacher training are closely linked to the aims of the educational process itself. Despite differences in the definition of these aims, there probably is broad agreement that they enable the trainee teacher to achieve a degree of:

- knowledge and understanding of the contents which form part of the school curriculum
- skill in teaching the school curriculum to develop pupils' physical, emotional and cognitive capacities
- understanding of the values that form part of the fabric of the societies in which they teach, and awareness that these need to be developed in the young, through example and appropriate educational activities
- recognition of, and effectiveness in dealing with, the factors that affect pupil learning such as individual differences or home background (cultural and linguistic differences)
- self-confidence and resourcefulness to cope with difficulties in the field and to adapt creatively to changing situations, selecting or devising teaching procedures accordingly
- awareness of the relationship between school and communities and the skills needed to enhance such relationships
- commitment and responsibility towards educating the young in the broadest sense of the word.

The above can be classified as aims which relate to:

(a) the knowledge base required to teach in a particular system;
(b) understanding of the processes by which children develop emotionally, physically and intellectually;
(c) understanding of the context in which education takes place (cultural and social);
(d) the strategies and skills needed to communicate knowledge and awaken interest and initiative amongst those who hold responsibility in relation to educational tasks within schools and in relation to the communities of which they form part.

Each of these aims is quite distinct, and each has to be related to the structure of teacher training, the pedagogical theories which underlie the

philosophy of training institutions, different procedures and the availability of support mechanisms. More pertinently, however, these distinct aims will be related to the people who make up the institutions, their backgrounds, abilities and level of commitment as well as the support they receive from the society for their efforts.

Discussions on initiatives to improve teacher training will, implicitly or explicitly, address the aims of training in relation to structures, philosophy, procedures, support mechanisms and the type of people involved. They will also acknowledge that the projects themselves are dependent on contextual factors over which those involved may not have control: funding levels, quality of personnel available, support from authorities, etc. For the time being, these interacting factors can be laid aside, while we examine the context and experiences of each of the participating countries. At the end of this paper, an overview of the issues and alternatives should enable us to bring together the experiences gleaned from the country papers and relate them to purposes, as well as the means for achieving such purposes.

Country description: Bangladesh

Educational context

Bangladesh shares with some of the poorer developing countries a number of very difficult problems. The level of literacy of the total population, according to 1991 estimates, is 26 per cent. Amongst rural women some 13.7 per cent only are estimated to be literate.

Despite efforts to progress towards the achievement of universal primary education, results have not been consistent. Although there has been a general improvement in the gross enrolment ratios from 65 per cent in 1979 to 75 per cent at present it is far from the target of 100 per cent enrolment. It appears from the figures that there have been better years, as in 1976 when gross enrolment ratios were reported to be around 79 per cent. Age enrolment is calculated realistically to be around 50 per cent (cf. Bangladesh, Sector Study on Education).

In 1979 Bangladesh was spending on education 1.4 per cent of GNP and 13 per cent of the total recurrent expenditures of the country - less than any country in the Asia/Pacific region with the exception of Pakistan. By 1986 expenditure appeared to have diminished, with 1.3 per cent of GNP being allocated to education. In 1987-88 only 10.3 per cent of total recurrent expenditure was for education. There is little scope therefore for cost saving measures within the education budget in Bangladesh. There is, however, a serious need for a higher level of investment in universal primary education (especially as the allocation to the primary level has also been decreasing proportionally since 1980); as well as in the improvement of secondary education where teachers appear to be poorly equipped for their tasks.

The education system in Bangladesh includes five years of basic education, three years of junior secondary, two years of secondary (general and technical/vocational) and two years of higher secondary or intermediate college. In terms of universal primary education the country aspires to

provide education up to 8th grade to all age groups by the year 2000. Alongside the national system of education is a parallel system known as Madrasah education intended to prepare students in religious studies. There are on-going efforts to bring the two systems closer to each other.

Steps taken to improve educational provision

Bangladesh has had three Five Year Plans since 1973, and is now operating on the basis of a fourth plan which runs from 1990-1995. In assessing the first three plans (Fourth Five Year Plan, 1990, p.6) problems pervading primary education were noted:

- continued low enrolment, high drop-out and repetition
- inadequate physical facilities
- unattractive academic environment
- low teacher motivation and performance
- teachers' absenteeism
- under-achievement of a large majority of children
- non-evaluation of students' performance
- inadequate supervision and management
- lack of community participation

In view of the above, the fourth plan emphasises quantitative and qualitative adjustments to the system to allow for the phased achievement of free and compulsory education. To this end, legislation has been enacted for compulsory primary education and, to encourage the participation of girls in primary education, tuition fees for girls in rural areas have been waived and the recruitment of women teachers is to be increased. The fourth plan further aims to reduce illiteracy from the estimated 70 per cent to approximately 50 per cent by the year 1995, and to provide educational opportunities through non-formal channels and continuing education for those who missed out.

The changes that have taken place over time, seemingly with qualitative effect on the system, are the establishment of a National Curriculum Development Centre in 1981 and the development through the Centre of a competency-based curriculum and teaching materials. The shift to competency-based curriculum in turn has led to an increased level of training activities to assist teachers in the implementation of this curriculum. In 1978 a National Academy for Primary Education was established to train teachers, supervisors and teacher trainers to carry out research and conduct examinations. There are plans to expand and reorganise the Academy so that it can provide more academic support to training institutions.

Teacher education: Characteristics, issues, alternatives

Practically all teacher training in Bangladesh is institutionally based with the exception of the distance training programme. This is a B Ed course run by the Bangladesh Institute of Distance Education for the training of secondary teachers. The Institute works with the University of Rajshahi (which awards the degrees) and with Bangladesh television.

The training of primary teachers takes place in 54 Primary Training Institutes. The predominant form of training equips previously untrained teachers to teach in the first five grades of the system. Minimal entry requirements are Secondary School Certificate with a higher level of achievement required for males than for females, due to the urgent need to recruit more women teachers. The course lasts one year and leads to a Certificate in Education. However, with the current high level of unemployment among trained teachers,[1] the annual intake of the Institutes is now being drastically reduced.

A second form of primary training, designed for in-service teachers, was introduced in four divisional Primary Training Institutes in 1989-1990. The creation of this programme arose from a report by Dr Shamsul Huq. In his report, Dr Huq emphasised the need to provide teachers with opportunities for upward and horizontal mobility (e.g. becoming head teachers, undertaking supervisory and field level jobs) and proposed that this should be done by further upgrading of their skills and knowledge, particularly in administration and management. The new course lasts one year and leads to a Higher Certificate in Education. Each of the four divisional Institutes admits 50 trainees a year. In addition to theoretical courses on administration, curriculum, psychology, management, learning strategies and community participation, the course emphasises a practical phase. This practical phase consists of an attachment to a primary school for two to three months in order to study its management and, it is hoped, to influence both headmaster and teachers to improve the school. Apparently, this innovation has been well received.

The preparation of teachers for secondary education is embodied in a Bachelor of Education programme offered at ten Teacher Training Colleges and a postgraduate Diploma in Education at the University of Dhaka. Although the B Ed programme is available to practising teachers and education officers, its sole concentration is on the secondary level. In this respect, the Huq report referred to above, has recommended that a B Ed (Primary) and Dip Ed (Primary) be developed, which in the long run could be offered at the four Primary Training Institutes currently running the Higher Certificate in Education.

The main developments in the *content* of teacher training programmes arise from the introduction at primary level of a competency-based curriculum. This has meant that the teacher training curriculum is being revised to incorporate the principles of the new primary curriculum. The current project is financed by UNICEF and is being carried out by a panel of experts. The curriculum revisions have in turn meant the production of

[1] It is estimated that 95 per cent of teachers are now trained (cf Bangladesh Country Paper, 1991). However, the Bangladesh Sector Review (1986) made reference to a 1983 survey showing that one in every four teachers at primary level were not qualified and that the task of improving the quality of teaching required pre-service training of more than 40,000 teachers and in-service initial training for 130,000 current teachers. In terms of newly trained teachers each year, the attrition rate of about 3 per cent calls for some 5000 teachers. At present the enrolment is about 3400.

new books, also funded by UNICEF and being carried out by the Directorate of Primary Education.

In assessing the current system of teacher training, the Bangladesh paper underlines several problems. These mainly relate to:

- differences in the qualifications of trainees entering primary teacher training institutes (ranging from high school certificate to bachelor degree)
- the reduced length of the course which in turn reduces the opportunity for quality training (especially of the trainees with less general education)
- the theoretical/abstract nature of the curriculum offered and the style of teaching [2]
- inadequate teaching facilities and resources at the training institutions
- the lack of opportunities for enrichment and promotion of training staff.

Equally, there are few incentives for teachers to participate in the Higher Certificate course, as it does not appear to advance their career development (contrary to what the Huq report expected the new programme to accomplish).

In view of the above problems, the Bangladesh paper suggests some radical measures. These would include overall raising of the quality of initial teacher training by raising the entry level to Higher Secondary Certificate, and transforming the course into a bachelor degree level programme lasting three year. Parallel to this, it is suggested that the current B Ed and Dip Ed programmes for secondary teachers should include a primary component and that opportunities for correspondence-cum-contact courses for the B Ed degree should be developed.

Proposals in the Bangladesh Sector Review paper could also be considered in relation to the improvement of teacher training, particularly those that suggest closer contact between training colleges and innovative curriculum development projects.

There is a clear need to provide additional funding to training colleges (currently about 1 per cent of the budget for primary education). On the other hand, given the current low intake at colleges, unit costs are said to be high. Perhaps some effort at rationalisation is required to lower unit costs, e.g. fewer colleges or higher student intake.

The Bangladesh Rural Advancement Committee's Facilitation Assistance Programme of Education (BRAC)

This programme was established in 1972 with the aim of contributing to the alleviation of poverty and the empowerment of the landless poor. It has since then developed a series of activities, of which the Non-Formal Primary Education Programme (NFPE) is relevant to the issues of concern in this report. The NFPE was started in 1984 to target the 'unreachable' children who did not have access to education because of poverty and

[2] Staff in training institutions are trained at Bachelor or Master's level but with little or no experience of teaching at primary level, and thus find it difficult to relate theory to the needs of teaching.

gender. The programme aims to reach two groups of children, those aged between 8-10 and 11-14, who never attended school. A three year curriculum was designed for the first group and a two year curriculum for the second. A special attempt has been made to enrol 70 per cent of girls in the BRAC schools. BRAC is funded by UN agencies and the World Bank. The typical BRAC school is run by a single teacher who teaches functional literacy, numeracy and social studies (including health, hygiene and basic science). Children attend the school six days a week for two and a half hours a day. BRAC teachers are trained initially for twelve days in a residential centre, where they learn elements of learning theory and practise teaching. Training procedures involve role playing and learning how to plan lessons. The training, as documented by Khanna, is participatory and learner centred:

> Trainees are introduced to teaching materials, books and accompanying teaching notes and to the use of teaching aids. They will use such aids as charts, picture cards and counting sticks. They are taught to utilise peer assistance methods: for example, to scatter the bright children so they can help others, assigning stronger students to help the weaker, and so on. They are taught never to punish a child but to use other methods of discipline. Comprehension rather than memorisation is stressed. Teachers are taught the importance of class routines and they are given a general structure that must be followed (although they may vary the timing a little). The teacher-trainers are trained by educational specialists working together with BRAC.

The results of the first five years of BRAC schools have been encouraging: a large number of children who have gone through BRAC schools have made their way into mainstream schools. The success in training the teachers to perform a competent job with the BRAC children is also noticeable. It must be noted, however, that teachers are carefully selected, being mostly women with 9-10 years of schooling who are recruited locally. They are paid a very small stipend. Women accept this because of the low employment possibilities in the villages. Teachers are also very closely supervised while they are teaching, and they attend training sessions one day a month where they meet and discuss with teachers from neighbouring villages. The more experienced and better teachers assist the weaker ones. There are also occasional visits of one good teacher to another teacher in a neighbouring village. In their second year of teaching, teachers have another six day refresher training course.

Summary

From the information in the Bangladesh paper the most noticeable change in teacher training is the revision of the Higher Certificate in Education curriculum to meet the needs of the new competency-based curriculum being introduced in primary schools. Another form of innovation is the 'practicum' component of the Higher Certificate in Education programme. Proposals for change centre on basic structural reforms, such as raising entry qualifications, lengthening programmes and raising awards to degree level. A further area for discussion might be on ways of linking other educational

experiences and innovations (such as those in non-formal education) with the content and processes of training currently taking place in the various institutions.

Country description: India

Educational context

This huge country with an estimated population in 1990 of 853.1 million people and an annual growth rate of 2 per cent also faces major problems of human and educational development. Its adult literacy rate is currently estimated at 44.1 per cent but 1985 figures indicate that female literacy is only 29 per cent. Rural dwellers make up 73 per cent of the total population.

India is a federal country, with government decentralised in 25 states and seven union territories. The provision of educational services is shared between the central and state governments, but most of the administration and control is in the hands of the states. There is eight years compulsory education, but the mean years of schooling for the population is only 2.2 (*Human Development Report*, 1991). In 1986, the country spent 3.4 per cent of its GNP on education. In 1987-8, spending on primary education was 8.5 per cent of all recurrent expenditure, and 41.8 per cent of total educational expenditure.

The current basic education system consists of eight years elementary schooling, divided into five years of primary and three of upper primary. The aspiration of the Indian government has been to provide this length of education to all children up to the age of fourteen. However, despite impressive gains, there continue to be problems of equitable access to educational facilities, inequities in the enrolment of girls in relation to boys (age enrolment in upper primary in 1986 was 25.6 per cent for girls compared to 60.6 per cent for boys) especially in rural areas, high drop out rates especially at primary level (50 per cent), inadequate school facilities, with many of these problems concentrated in the more disadvantaged states of the country.

Steps taken to improve educational provision

Since Independence, there have been seven Five Year Plans, all of which have attempted to deal with the quantitative and qualitative problems of the system. There have also been a number of review committees assessing achievements and proposing changes. The eighth Five Year Plan renews the call for universal primary education. The current most important policy document - The National Policy on Education - was formulated in 1986. It set the goals of five years schooling for all 11 year old children by 1990, free and compulsory education by 1995 for youngsters up to 14 years old, as well as equal opportunity not only in access but also in conditions for success. To achieve these goals it proposed a large and systematic programme of non-formal education for school drop-outs, and for children unable to attend school because of where they live or because they have to work (for description of a project in Rajasthan, see 'The Shiksha Karmi

Project', Institute of Development Studies, 1991). It appears, however, that many of the proposed policies have not yet been implemented, due to the political difficulties encountered by India in recent years.

Teacher education: Characteristics, issues, alternatives

Pre-service elementary teacher training takes place in some 1000 Elementary Teacher Training institutions and lasts two years. At present entry requirements are ten years of schooling (Matriculation), but in a growing number of states the senior secondary examination is required (twelve years of schooling). Teachers trained in this manner are eligible to teach at primary level; but for upper primary some states require that teachers have a bachelor degree and a degree in education. There has been an significant increase in the number of trained teachers since 1950. The percentage of primary level teachers has increased from 58.8 in 1950 to 86.5 in 1986-87; while the percentage of upper primary level teachers has increased from 53.3 in 1950 to 87.4 in 1986-87. Officially, therefore, it would seem that the current percentage of underqualified teachers is low. However, it would seem that some 40 per cent of teachers have been deemed trained due to their length of service (twenty plus years) even though they have not had any formal training. Currently, there are efforts to clear the backlog of untrained teachers through correspondence-cum-contact courses.

As well as the training offered by the elementary institutes, the trend is to move towards a one-year postgraduate course, or a four-year Bachelor of Education/Bachelor of Science or Arts programme in four Regional Colleges of Education. Teachers trained in this way are eligible to teach up to tenth grade.

There seems to be a mismatch between supply and demand of teachers, in that in some states more teachers are trained than are needed, while in others not enough teachers are being trained. It is clear that if the system is effectively expanded to meet the needs of UPE, many more teachers will be required than the numbers actually trained (APEID, 1991).

Other problems include the lack of adequate facilities in some of the training institutions, and the quality of the academic staff teaching there. The content and process of teacher training is not always relevant to the realities of the classroom in most of the country's primary schools. Most importantly, teacher training needs to reflect changes in the school curriculum, as well as in the system of inspection and supervision.

There are two key areas where significant innovations are being proposed and implemented: firstly, in the elementary teacher training curriculum; secondly, in the structure of teacher education.

Curriculum changes

From 1978 to 1986 the curriculum of elementary teacher training was regulated by the 'Teacher Education Curriculum - A Framework' developed by the National Council of Teacher Education. The framework provided guidelines for curriculum re-organisation along the lines of task-oriented and performance-based curriculum development, stressing flexibility and relevance. It provided for three main curriculum areas :

(a) Pedagogical theory (20 per cent of time)
(b) Working with the community (20 per cent of time)
(c) Practice teaching and content-cum-methodology (60 per centof time).

Pedagogical theory covered child development, teaching and learning in Indian society, and various elective activities. *Working with the community* involved activities in which trainees work interactively in the everyday life of the community.

Practice teaching and content-cum-methodology covered the following main subject areas: language, mathematics, science, social sciences, work experience, art education and health/physical education. Trainee teachers were to be prepared in teaching methods through a 'core training package' (basic teaching skills).

With the effort in recent years to develop a national system of education with a common structure, a national curriculum framework and minimal levels of attainment for each educational stage, there has also been need to rethink the curriculum of training institutions. Thus, the National Council of Teacher Education set about producing the 'National Curriculum for Teacher Education - A Framework', which was brought out in December 1988. Emphasis in this framework is on teachers acquiring comprehensive understanding of professional knowledge areas, on the development of skills, attitudes and values, and on a functional orientation of the content of training. Teachers should be trained within a flexible programme which accommodates local and regional perspectives, recognises individual differences and places emphasis on providing trainees with skills for self-directed learning.

The proposed curriculum has three main areas of study:

(a) foundation courses including 'Education in Emerging India' and 'Elementary School: Learning Processes and Adjustment' (20 per cent of time);
(b) stage-relevant specialisation for the areas of elementary education and teacher functions, and the teaching of language, mathematics, environmental studies, health and physical education, art education, and work experience (30 per cent of time);
(c) field work or practicum including practical work and internship in teaching (40 per cent of time).

Each trainee must also take two optional subjects (10 per cent of time) in addition to the above. One of these must be in a conventional curriculum area such as science, social science teaching or pre-school education. The other should be taken from electives in out-of-school or special areas, such as adult and non-formal education, population education, educational technology, special education or tribal education.

The curriculum reform also envisages raising entrance requirements for the elementary teacher training programme to higher secondary school certificate. At present, different states are in the process of revising the training curricula along the above lines.

Structural innovations

The activities of teacher education have been developed and co-ordinated through two national institutions: the National Council of Educational

Research and Training (NCERT) and the National Council of Teacher Education (NCTE). The NCERT, through its Department of Teacher Education, systematically collects and diffuses information on innovative practices in teacher training institutions, in areas such as enrichment programmes, research and experiments, evaluation and assessment, professional growth of teacher educators and self-supporting programmes. It also runs the four regional Colleges of Education which offer the four year integrated degree course.

The NCTE was set up by the National Government to function at state level, with the task of ensuring the maintenance of standards in teacher training institutions. Its functions include undertaking revision and renewal of curricula (hence the production of the current framework), developing norms for accreditation of training institutions and developing textbooks and materials. Unfortunately, to date the NCTE has not achieved the status of a statutory body and has little power to enforce the policies it suggests.

The most important structural innovation affecting teacher training has been the setting up of District Institutes of Education and Training (DIETs) as a means of decentralising the functions of co-ordination and academic development within teacher training (previously carried out by NCERT and NCTE). The role of DIETs is seen as crucial in bringing about improvements in pre-service and in-service teacher training for the elementary school and for non-formal and adult education. To date some 100 of these institutions are in operation in 22 states (the plan is to reach 262). DIETs are designed to undertake pre-service and in-service training, to provide resource support (such as development of materials, evaluation instruments), and to conduct action research related to training. It is expected that as DIETs are set up they will gradually take over teacher training functions from sub-standard institutions which will gradually be phased out. DIETs are expected to be functionally autonomous in academic, administrative and financial matters; they are immediately accountable to the District Board of Education and ultimately to the state government or union territory administration. DIETs are also expected to be in close contact with those they serve, whether schools, teachers and other administrative personnel, as well as with other community organisations.

To carry out their functions it is envisaged that DIETs have seven departments:

- Pre-service Teacher Education
- In-service Programmes and Extension Services
- District Resources Unit for Adult and Non-formal Education
- Planning and Management
- Educational Technology
- Work Experience
- Curriculum and Evaluation

Below is a description of the DIET, Rajinder Nagar in New Delhi, visited by the Commonwealth Secretariat team:

> There are four DIETs in the Delhi area. Each DIET has seven departments, responsible for conducting two-year courses in pre-service

elementary and upper primary education. In-service programmes are also run at these levels. The trainees are from the designated catchment area of the DIET. Another major training activity is the training of what is called 'functionaries', as in the case of field trainers in adult education.

Rajinder Nagar DIET in New Dehli has fifty students in year one and fifty students in year two. The trainees focus on lower primary level for the first year and upper primary for the second. Staff members of this DIET have worked in the National Institute of Educational Planning and Administration (NIEPA), NCERT but, apart from the head, they have very little primary level experience between them. During trainees' practice teaching, staff also teach in primary schools to gain experience at this level ... Each DIET works with one or more model schools where trainees are posted for teaching practice. The DIET may also use school resources for their own activities, for example, the music teacher from the school may assist with functions at the institution, while the institution puts its resource centre facilities at the disposal of the school ...

The DIET also has what it calls a lab. area in a low income district with a high rate of illiteracy. Every DIET has identified one such district in its own catchment area and part of the work done is actually action research for their own institutions and trainees. Trainees and faculty staff are involved at the start of the institute's life in conducting in-depth surveys of needs in the catchment areas. Illiteracy is one of the major priorities they have ascertained. They work closely with NGOs in these areas where adult education and community activities are concerned. Very close relations are developed with schools and community organisations - a strategy to win local support. All staff are local which helps to develop and maintain relations with the community.

Besides DIETs, there are plans to strengthen existing Colleges of Education to prepare a higher quality of secondary teachers, and to become Institutes of Advanced Educational Studies able to offer comprehensive undergraduate and postgraduate teacher training programmes for all stages of the education system. These institutes would have provision for higher level academic posts (professors and readers), equipment and library grants, sophisticated computer facilities, research grants and assistance for in-service teacher training activities.

Summary

The most interesting development in India appears to be the effort to make institutions in charge of improving quality in teacher training more flexible and decentralised. In this sense, it will be important to watch the effects of DIETs on the quality of teachers and teaching. Equally important appears to be the concern to link teacher training to community activities and development and to train teachers adequately for this. The proposed new teacher training curriculum would appear to have the potential of linking the training process more effectively to changes in the national system of education. If appropriately implemented, it would also support a more self-reliant type of teacher and be more responsive to special interests (through optional subjects) and non-conventional areas of education.

Other areas of innovation are documented in Khanna's report on *Alternatives in Initial Teacher Training for Basic Education: A Critique of Policy and Practice in India and Bangladesh*.

Country description: Pakistan

Educational context

Pakistan is the ninth most populous country in the world with 122.6 million people estimated for 1990 (and growing at a rate of 3.09 per cent per annum) of which 44 per cent are under 15 years old and 71 per cent are rural dwellers. The literacy rate is also one of the lowest in the world (31 per cent in 1985) and among women is even lower (18 per cent in 1985), according to the *Human Development Report* (1991).

Gross enrolment rates for the primary level are around 50 per cent (32 per cent for girls). Secondary education has an enrolment rate of 16 per cent. A major problem is the participation of girls in the education system as they only represent a 28 per cent age enrolment at the primary level; the situation being worse in the rural areas. Contributing factors are the lack of sufficient schools for girls, and the shortage of trained female teachers, as well as absenteeism among women teachers.

Together with the official system of education there is a parallel one which imparts the traditional Islamic Education, including Mosque schools, Mohalla schools for girls and Nai Roshani schools for youngsters between 10 and 16 years of age.

Expenditure in education stands at 2.2 per cent of GNP, 5 per cent of total public expenditure. For primary education it represents 36 per cent of total education expenditure (*Human Development Report*, 1991).

Steps taken to improve educational provision

There have been six Five Year Plans since independence, none of which appears to have led to successful achievement of the targets of quantitative expansion and qualitative improvement of education services. The current Five Year Plan (1988-1993) has given top priority to education development, suggesting that 41 per cent as opposed to the current 36 per cent of the education budget be allocated to primary education. The seventh Five Year Plan aims to achieve compulsory education for all for the first five years of the system. This will be facilitated through access for all five year olds, including girls, and ensuring that each community has a school within a radius of 1.5 kilometres. The plan aims to raise the quality of teachers (currently about 25 per cent of primary teachers are untrained) by changes in teacher training, making entry requirements more flexible and giving preference to local candidates. The plan also aims to improve educational infrastructure and the provision of textbooks.

In pursuing the above aims, the curriculum has been revised to establish an integrated curriculum for classes 1 to 3 of the primary school. This has involved preparation of textbooks and teachers' guides as well as other learning materials (a national teaching kit). The curriculum is being adopted experimentally in all provinces. Efforts are also being made to

improve management and supervision activities, to bridge the gap between schools and community, and to provide non-formal education opportunities.

Teacher education: Characteristics, issues, alternatives

Growth in the supply of teachers has been slow since independence and their training has been considered insufficient to cater for the needs of primary and middle schools. This situation is seen as one of the factors influencing the high drop-out rates at primary level.

Primary or elementary school teachers are trained in the Normal Schools (an institution stemming from the nineteenth century) and Colleges of Education, a total of 86 at present. There are two types of course offered, both of one year duration. The first awards a Primary Teaching Certificate for grades 1 to 5; the second awards a Certificate in Teaching for grades 1 to 8. Entry requirements are Matriculation (10th grade) for the first course and Intermediate School Certificate (12th grade) for the second.The main difference between the two certificates lies in the number of special subject methods courses which they offer. The Primary Teaching Certificate prepares teachers to teach six subjects. With the need for greater specialisation in middle schools, the Certificate of Teaching focuses on only four subjects.

Junior secondary (grades 6 to 10) teachers are also trained in two ways at Colleges of Education. There is a three year B Ed programme that takes in applicants with 12th grade (Higher School Certificate), and a one year B Ed which is a postgraduate programme to prepare BA and BSc graduates for teaching. Finally, upper secondary (11 and 12th grades) teachers are trained at M Ed or MA(Edu) level for one or two years respectively, depending on whether or not they have a B Ed degree or a BA/BSc degree.

The staff in training institutions is considered to lack experience in primary school teaching. They tend to be subject specialists and to emphasise a very theoretical form of lecturing. In a programme of only one year's duration, around ten subjects, plus a short period of teaching practice, it is very difficult to avoid rote teaching and learning. It is being considered (as indicated in the country paper) that all staff should possess master degrees of one kind or another, depending on what they teach, and that they should also engage in some teaching in the practice/ experimental school attached to their college. The ODA team that evaluated the training needs of teacher educators found that there were many problems that needed to be considered. In their own subjects, college lecturers seem to stagnate as they have few opportunities for study leave, for involvement in curriculum development at provincial level or in textbook production.

There are a number of problems related to the structure and content of the teaching programme, besides those noted above. The most obvious difficulty relates to the length of the course and the number of subjects and activities that are supposed to be carried out in a year. The content appears to be clearly separated from the teaching of methods, and this was strongly criticised by the ODA team. This criticism is valid in the context of a one year course which should in fact only be preparing to teach in schools; in

this respect, the major criticism is the lack of time allocated to practicum (1/6th of the total time). It was also noted that the colleges lack up-to-date resources (audio-visual aids, home economics room, libraries, consumables, etc.) to make possible a form of teaching which is less centred on rote learning and more on student activity. for example, the ODA team noted that experiments tend to be sets of exercises already laid down in the school texts. Even when there are resources, the team noted, these are under-utilised.

The assessment made of the effect of teacher certification on student achievement in Pakistan by Warwick, Naumann and Reimers (Project BRIDGES, n.d.) showed very little effect over and above that of the level of formal school training. As a result of observing two colleges, the authors of the study concluded that one reason for the above findings lay in the quality of teacher training itself. The problems in this area were listed as:

(a) the poor quality of intake - the most talented and motivated students tend not to enter primary teacher training;
(b) the lack of motivation of teacher educators;
(c) the abstract and theoretical nature of the curriculum and the teaching, which is mostly of the lecture type. Methods are not emphasised because most of the time is spend reviewing subjects such as mathematics and science;
(d) the methods of evaluation demand rote memorisation and repetition of curricular materials, and even widespread cheating was noticed in the colleges visited.

One of the main difficulties faced by teacher training institutions in Pakistan is the lack of sufficient funding. It is estimated that in a period of 33 years there has been a 46 per cent shortfall between allocation and actual expenditure in teacher education.

The Pakistan country paper refers to three alternatives to the conventional model of teacher training: the B Ed model, the field-based teacher training programme and the distance education training programme.

The B Ed model has been referred to above as one of the current forms of training teachers to teach at junior secondary level. It is a three year course for applicants with twelve years of education (the Higher School Certificate in humanities or science). Trainee teachers specialise in general education (arts), sciences, commerce, agriculture, home economics, and industry or vocational education. The model, however, appear to have shortcomings in both content and duration.

The field-based teacher training programme functions on an experimental basis in the northern areas of Pakistan. It is aimed at practising teachers and takes place while the teacher is teaching in his or her school. Training is conducted by school headteachers who are recruited for the purpose as 'master teachers'. Teaching manuals are provided for all school subjects. The content of training is based on the conventional Primary Teaching Certificate syllabus, but emphasises a different approach to teaching which sees the pupil as the centre of the learning process. Teachers on the programme sit for the PTC examination at the end of their year of training.

An evaluation of the programme has been carried out by the National Institute of Psychology. The evaluation used interviews and classroom observations to compare college trained and field-based trained teachers. Results showed that field-based teachers appeared to be better teachers in that they taught well-planned and structured lessons, made skilful use of the blackboard, knew how to ask questions and stimulate pupil interest, were more resourceful in preparing their own indigenous aids, were better teachers of Urdu and mathematics and showed better ability to communicate and a more positive attitude to teaching. However, comparison of the achievement scores of pupils of both groups of teachers showed no significant differences.

The distance education teacher training programme operates at the Allama Iqbal Open University (Islamabad). It offers almost all levels of training, the most popular being the Primary Teaching Certificate. It utilises correspondence, radio and face-to-face tutorials at study centres. Most interesting are the practical workshops and practice teaching components which are carried out under the guidance of a part-time tutor. The Primary Teaching Certificate programme consists of eight half credit courses and the practical training is of six weeks' duration.

Although the distance programme has not been formally evaluated some of its strong points are immediately evident. It attracts a large number of students, especially women, who otherwise would not have the opportunity of teacher training. It is more effective than the conventional training programme in implementing the practical components of the curriculum. The limitation is that because it is centred in the workplace of each student teacher, it fails to prepare them for conditions elsewhere. While access to study centres and tutorial assistance is a strong point of the programme, this possibility is more difficult for those in remote areas. Here the percentage of student teachers attending tutorial sessions is very low.

Summary

It would appear that initial teacher training for primary and middle school teachers suffers from problems associated with quality of intake, quality of trainers and training procedures (including little opportunity for proper practice teaching) and underfunding. A very obvious problem is the short duration of the programme, which means that too much has to be covered in one year.

The introduction of a three year B Ed programme (which could be extended to four years) is seen as one of the promising alternatives for the intermediate and secondary school. If successful in its current implementation at the Government College of Education for Science in Lahore and at the Federal College of Education in Islamabad, it could serve as a model for teacher training at this level. Primary teacher training would also need to be extended to two or more years.

The strong points of the field-based and distance programmes could be used to give a different approach to conventional training. In this respect, one might suggest that the basic philosophy underlying the college training programme is in need of examination, to eradicate its emphasis on theoretical content and place greater emphasis on active and student-

centred learning. This in turn requires attention to the quality of teacher educators and the resources made available to teacher training institutions.

Country description: Sri Lanka

Educational context

Compared to Bangladesh, India and Pakistan, Sri Lanka is a country with fewer problems of a demographic order. With a population of 17.2 million of which 70 per cent live in rural areas (though with a very high density level - 2658 per 1000 hectares), its estimated annual growth rate between 1990 and 2000 is 1.2 per cent.

From the educational perspective, as indicated in figures in the *Human Development Report* (1991), the adult literacy rate is 86.7 per cent (1985), and is slightly higher for women at 88 per cent. Sri Lanka seems to have 100 per cent primary enrolment and 70 per cent secondary enrolment. Girls do not appear to be handicapped in their education at primary or secondary level. There is compulsory education for ten years, though the mean numbers of years of education for the population is 5.5.

Given the primary pupil/teacher ration of 32 there does not seem to be an urgent need for increase in teacher numbers, but the greatest problem is the backlog of untrained teachers. Analysis of trends in the growth rate of teachers during the decade beginning in 1979 shows no link between the numbers of schools opened and closed and numbers of teachers being trained and recruited. According to the ADB Report (1989), in addition to the existing numbers, there would be need for 2500 trained non-graduate and 1100 trained graduate teachers every year until 2001. If existing Colleges of Education and university programmes (and possibly two more new colleges) operate at their full capacity these goals could be achieved.

Teacher education: Characteristics, issues, alternatives

In-service teacher education has a long tradition in Sri Lanka. Organised pre-service training for non-graduates (school leavers) has only existed since 1985 when the Colleges of Education were established.

At present the main forms of initial in-service teacher training involve both long-term and short-term programmes. These include part-time and full-time institutionally-based courses at Teachers' Colleges and Universities and an English training programme (sponsored by the National Institute of Education). They also include distance mode programmes for teachers who remain in the field, organised by the Open University and the Department of Distance Education (National Institute of Education). There are also short courses which mainly provide up-grading in special subject areas.

Pre-service training is restricted to selected A-level school leavers who successfully pass an entrance examination and is offered in a three year training programme at seven Colleges of Education. The preparation leads to a National Diploma in Teaching.

There is no pre-service training of graduates at present other than short three-week training organised by the Colleges of Education. These courses are also offered to non-graduates being recruited for teaching.

In assessing the problems of the teacher training system in Sri Lanka, the ADB report (1989) noted the inadequate provisions for pre-service teacher training, and recommended that facilities for the training of non-graduates and graduates be expanded.

Given the in-service tradition of teacher training in Sri Lanka and the persisting problem of the backlog of untrained teachers which is now around 53,000 non-graduate teachers and 28,000 untrained graduates, it is not surprising that the focus of innovation has been on developing an institutional form of pre-service training and a mass programmes of in-service training for teachers in the field. These innovations, described below, are centred in the new Colleges of Education and in the distance programmes.

College of Education training programme

Since 1985 seven Colleges of Education have been established which offer a three year programme of initial teacher training leading to a National Diploma in Teaching. Each of six colleges specialise in science, mathematics, English, physical education, religion and a seventh one opened in 1986 offering courses in science, mathematics, primary education and home science. It is expected that a similar new college will open in 1991, with two more in the pipeline for the northern and eastern parts of Sri Lanka. Each college has a capacity for 250 students, but total enrolment does not yet reach this figure because of problems of construction and renovation.

Teacher training is structured in two institutionally-based years and one year on internship in the field, after which the trainees receive a National Diploma in Teaching.

As indicated by Tatto, Nielsen and Cummings (1991), the model underlying the Colleges of Education is that of a fairly balanced programme of studies (by comparison with Teachers' Colleges) which includes subject specialisation (21 per cent of time allocation), pedagogical knowledge (38 per cent), supervised practice (11 per cent) and co-curricular activities (30 per cent). The philosophy of training is one that emphasises the development of a well-educated and critical cadre of future practitioners, who understand what they have to teach and can apply the curriculum to fit the needs of learners. The programme seeks to develop community awareness through its co-curricular activities.

Distance training programme

This programme, organised under the responsibility of the National Institute of Education, trains non-graduate (OL/AL) teachers already in the system, and since 1991 has been training a large number of teachers recruited to teach while they train. At present it reaches some 35,000 teachers altogether. Distance education training lasts from three to five years after which teachers are awarded the Trained Teachers' Certificate. To date 9429 teachers have been trained, of which 77 per cent of those enrolled have received their certificate. The mode of teaching is participatory and modular, and takes place through printed material and assignments, with the teacher managing his or her own process of learning. The local resource

centres serve as a meeting place for tutorials (three weekends a month are required as contact sessions) and for the supervision of school-based teaching practice. Progress is recorded through continuous assessment. The emphasis, however, is on the final written examinations which contribute 80 per cent to the final grade.

The curriculum of the distance programme includes three areas of specialisation for the untrained non-graduate teachers: Primary Education, Science and Mathematics. Trainee teachers are trained in the subjects of the school curriculum and there have been some fifteen courses of this kind.

By comparison with the Colleges of Education, the distance programme appears to lay more emphasis on pedagogical preparation, but equally requires more time to be given to the study of subject matter. There is no established teaching practice period, but teachers are supervised three times in the year and also have days set aside for co-curricular activities.

Evaluation of training programmes

There has been a comparative evaluation of the training provided by Teachers' Colleges, Colleges of Education and the distance programme by a team working in the BRIDGES programme (Tatto, Nielsen and Cummings, 1991). The study focused on determining 'programme effectiveness' which was defined as:

> ... one capable of improving a trainee's mastery of subject matter and teaching skills (on both theoretical and practical levels), and capable of promoting the development of professional attitudes - all of which would enable the trainee to structure a learning environment that would encourage learning and promote pupil achievement. Pupil achievement was thus conceived as the ultimate indicator of programme effectiveness ... .(page 14)

The study included two of the seven Colleges of Education, two of the sixteen Teachers' Colleges and two of the thirty Centres of Distance Education. Data was collected on a sample of trainees at the beginning and end of their training, and one year after the completion of their programme. They were compared with a control group of similar teachers who had not received training. They were measured in their knowledge, skills and attitudes; teacher performance was observed, as was school context; measures of pupil achievement were collected. The results of the study indicated that training made a difference on all indicators when compared to no training; more specifically it showed that trainees from Colleges of Education and distance programmes performed better than trainees from Teachers' Colleges. Colleges of Education were effective in imparting mathematics knowledge and pedagogical skills in mathematics and mother tongue; their trainees retained the advantage after they had graduated and were teaching in the classroom. Distance education was also effective in terms of the learning of mathematics and mother tongue, as well as in the skills of teaching. But the trained teachers tended to lose the advantage more rapidly once they were in the classroom, probably because of the lack of supervision and contact which existed whilst in training. Neither of these two programmes seemed to have a positive effect on the attitudes of the

trainee teachers. The graduates from Colleges of Education and distance education showed a higher level of performance in the use of effective teaching strategies.[3] These teachers used more innovative instructional techniques than untrained teachers or graduates of Teachers' Colleges. Pupils trained by graduates from the Colleges of Education did better in mathematics and mother tongue. The authors of the study concluded that, in this respect, the quality of teaching *does* affect pupil learning and this is evidenced most clearly by the teachers trained in the Colleges of Education.

> What the teacher does in the classroom such as use of innovative instructional techniques and practices, and what the teacher knows about the subject matter, in this case mathematics, is positively correlated with measures of pupil achievement. *Teacher proficiency* is a composite variable representing teaching knowledge and skills, and classroom performance measures. Teacher proficiency is positively correlated with measures of pupil achievement in mathematics. *The time used* on traditional instructional techniques such as *teacher-centred activities* (e.g. recitation, lecturing) is negatively correlated with measures of pupil achievement in mathematics. In other words, the longer the time teachers spend in lecturing the lower the mathematics achievement of the pupils. This makes sense if we think that *pupil-centred activities* may give the pupil more opportunity to explore and achieve a better understanding of the subject, especially mathematics, than lectures or other teacher-centred activities. (page 30)

The evaluation of the training programmes showed finally that the distance programme is the most cost-effective, while the comparison between the two residential programmes showed the Colleges of Education as being more cost-effective than the Teachers' Colleges. As noted above, however, teachers trained by distance mode do not retain the level of performance achieved during training once they are back in the field.

Summary

The Sri Lankan situation is very interesting in that it highlights, firstly, the effects of late introduction of pre-service training (and hence the problems of in-service untrained teachers) and secondly, the positive effects on education of recruiting more highly qualified trainees than seems to be the case in the other countries.

The two important innovations in the country, the Colleges of Education and the distance programme, indicate advantages of a different nature. In terms of cost-effectiveness, the distance provisions would seem to be the most appropriate for clearing the backlog of untrained teachers, and should probably be preferred to the institutionally-based programmes of the Teachers' Colleges. In terms of quality of teaching, of pupil learning and of

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[3] Assigning and reviewing homework, involving pupils in the teaching and learning process, monitoring pupils' progress during lessons, knowledge of subject matter, effective teacher pupil interaction and effective use of instructional resources. (Tatto, Nielsen and Cummings, 1991, p.28)

long-term effectiveness, the Colleges of Education seem to offer a better alternative. The suggestion in this respect, stemming from the BRIDGES study, is that the combination of College of Education *pre-service* model and the distance education *in-service* model would seem the most appropriate strategy for the needs of the country (Tatto, Nielsen and Cummings, 1991).

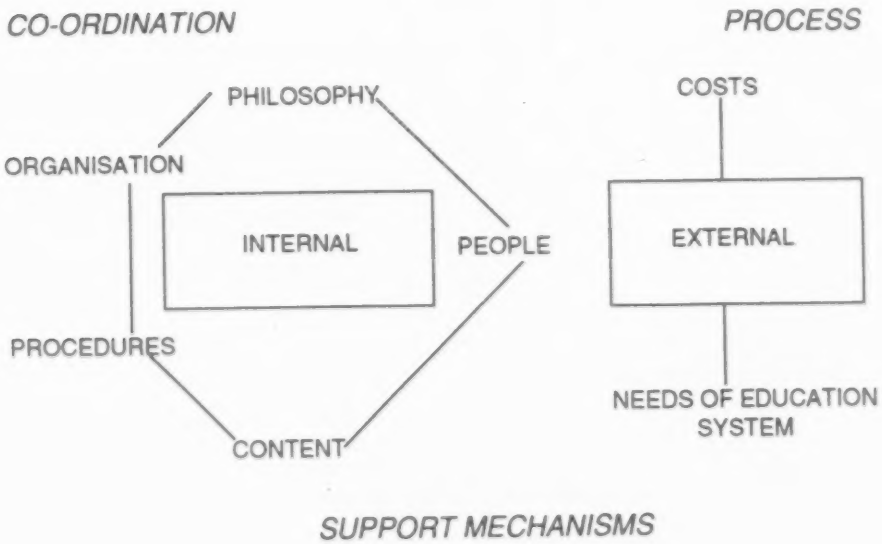
Issues and alternatives: an overview

Having examined the situation in the four countries in terms of teacher training procedures, abiding problems and issues, and alternative forms being implemented, it will be useful to draw some generalisations as possible starting points for discussions .

On the basis of the framework suggested in the first part of this paper and the knowledge gained from the country descriptions, it is possible to view three sets of elements for consideration in relation to the teacher education process. These are the factors *internal* to the process itself, which on the one hand relate to its purposes and on the other to the means for carrying out such purposes (structure, content, pedagogical theory, procedures and people). There are also the *external* factors which, in the case of the countries considered, are consistently indicated as being quantitative (number of teachers needing training) and costs of the training process. Finally, there are also the *support mechanisms* which act from outside the training process, yet influence its development and quality.

The figure below may help to illustrate these elements:

Factors affecting the quality of teacher training



Issues related to the training process

The purposes of the training process have been described in a general way at the beginning of this document, and presumably all countries share these in similar ways. The crucial issue is how these purposes are reflected in the organisation, contents and procedures used in the training institutions, as well as in their philosophy (or pedagogical theory) and the education and experience of their staff. It is here that a number of problems have been highlighted by the different countries. They are outlined below:

Structure of the training process

In all countries there appear to be mixed systems of training which are the result of the continued existence of older institutions and the emergence of new ones, with a greater focus on raising the level of training. Thus we find institutes of primary teacher training preparing secondary school leavers (generally, lower secondary) at a certificate level, in one or two year courses in three of the countries considered. Parallel to these, there are college-type institutions requiring a higher entry level (upper secondary certificate) or offering postgraduate one year teacher training. To a large extent, the certificate-type courses were originally aimed at the training of teachers already in the field (in some countries such as Sri Lanka this is still an essential need because of the backlog of untrained teachers) but now need rather radical changes.

The problems with the structure of one or two year courses for the pre-service training of secondary school leavers is that they may not be long enough to cater for many of the purposes signalled out for the training process (e.g. increasing general knowledge base, learning about the subjects of the school curriculum and how to teach these, developing motivation, attitudes and values required for commitment to teaching, especially in difficult circumstances). Thus, countries like Bangladesh, India and Pakistan are talking about the need to extend the length of the teacher training programme and to raise the entry requirements to upper secondary level.

The curriculum

The issue of how the purposes of teacher training can be reflected in the curriculum is also highlighted in the country reports. Pakistan is involved in adapting the contents of teacher training to the new competency-based curriculum being prepared for primary education. India has developed a second document on curriculum for teacher training within ten years, to cater for a more comprehensive, less fragmented curriculum which gives trainee teachers the opportunity to select areas, as well as having to follow a prescribed curriculum. The emphasis of the Indian curricular proposals appears to further the involvement of the teacher in community development or other non-school-specific related activities.

The way in which the curriculum is taught, the procedures used to assess progress, and the time allocated to its various components may also distort the avowed purposes of teacher education. In this respect, the evaluation of teacher training in Pakistan by the ODA team highlighted the excessive use of the lecture method, the lack of practical emphasis because too much time had to be spent reviewing the content of subjects such as

mathematics and science, and the emphasis on memorisation in relation to assessment.

The practicum phase of teacher training is an area of concern to all the countries, with the focus on implementing the purpose of training for good teaching in the field. This, of course, is particularly relevant to pre-service training. Sri Lanka has included a one-year internship as part of its teacher training programme, and a similar proposal is included in India's *Framework* document for curriculum change. Pakistan noted the inadequacy of the practice provisions in a programme of only one year's duration and suggested that this be changed.

Training theory

Although less developed in the country papers, there is a hint that the predominance of pedagogical theory in training institutions may be an issue in relation to achieving the purposes of teacher training. The changes in orientation between the first and second curriculum document in India appear to indicate a shift from preparing teachers specifically in the skills of teaching towards the concept of a more autonomous type of teacher, capable of self-directed learning, more aware of individual differences and local and regional perspectives. The current reform in Bangladesh may in fact reflect a different philosophy as it attempts to bring out the teacher training curriculum in line with the new competency-based school curriculum. Of interest also in Bangladesh is the apparent success of the BRAC experience, where a concept of field-based training emphasises flexibility and a learner-centred pedagogy. The three types of institution that exist in Sri Lanka also reflect different training theories in the way they structure their curriculum. Both the distance programme and the College of Education curricula recognise that adequate subject knowledge and teaching skills are as or more important than pedagogical theory. By contrast, the more traditional Teachers' Colleges tend to emphasise the pedagogical and practical aspects of training over subject matter knowledge.

The teacher educators

The successful implementation of the purposes set out for teacher education is to a large extent dependent on the people within the institutions: teachers, administrators and supervisors. Again, the different country reports have highlighted problems in this area. The fact that many of the institutions' lecturer staff do not have primary school experience is noted, and that they tend to find it difficult to relate the content of what they are teaching (especially in the pedagogical subjects) to the issues of primary education. This was described in the Bangladesh paper as reflected in a theoretical/abstract style of teaching. The ODA team noted the same problems in the colleges they visited in Pakistan, including the lack of motivation apparent in the teacher educators.

Issues related to factors external to the training process

It is not difficult to make a long list of external factors which affect the quality of the training process and its effectiveness. However, for the purposes of this overview, we will mention only two. The first is related to

the quantitative needs of the system; the second to the funding of teacher training.

To achieve universal primary education in the next ten years, at least three of the countries will have to produce greater numbers of teachers than are being trained at present. It would appear that in all countries there is the institutional capacity to increase the number of teachers trained provided adequate funding and teaching personnel are available. The most pressing problem at present, however, is the backlog of untrained teachers in all countries. Also important, especially in countries such as Bangladesh and Pakistan, is the shortage of women teachers. The presence of many untrained teachers in the system and inadequate provisions for pre-service training of new teachers will of necessity continue to affect the quality of primary education provided. It will also continue to influence the drop-out rates, which are high in some of the countries considered, unless urgent measures are taken to improve the situation.

The second issue affecting the possibility of changes in the teacher training system is related to its costs and the levels of funding. It would appear from the information provided by the countries that funding levels are low. Teacher training in Bangladesh receives about 1 per cent of the primary education budget. In Pakistan it is estimated that over a period of 33 years there has been a 46 per cent shortfall between allocation and actual expenditure in teacher education. In Sri Lanka the overall increase in funding for teacher education since 1982 has been around 5.6 per cent.

Support mechanisms for teacher education

Given the number and variety of institutions in the countries included in this report, there is a vital need for centres which provide mechanisms for co-ordination, accreditation, professional assistance in matters such as curriculum development, and which carry out research and provide research information to institutions. Centres of this kind *do* exist. Bangladesh has the National Academy for Primary Education. India has the NCERT, NCTE and is now developing the District Institutes of Education and Training (DIETs). Pakistan has a National Academy of Education Planning and Management and a National Committee of Teacher Education. Whether these institutions function in the way suggested above is probably something to be discussed. However, they have the potential to offer the support needed to improve the quality of teacher education.

Alternatives open to consideration

It would appear that alternatives could be considered by the countries participating in the colloquium. We will group them here according to:

(a) the structure of the training programmes and their institutional basis;
(b) the curriculum and training theory;
(c) the support mechanisms for the system of teacher training.

Structure of training programmes

It would seem that all countries have voiced dissatisfaction with programmes which are too short and which take in applicants who have less

than full secondary training. The trend seems to point to a model of a College of Education programme at diploma level at least, lasting about three years. The Sri Lanka model merits closer examination, and countries should consider whether or not they are in a position to move along these lines.

The urgent need to cater for the training of practising teachers and also to increase the number of women in the profession suggests that distance programmes can have enormous advantages. The evaluation of the cost-effectiveness of the Sri Lanka distance teacher training suggests the consideration of either modular forms of training (combining institution-based courses with correspondence and field supervision) or full distance programmes.

Curriculum and training theory

Here, it would seem clear that alternatives which emphasise a sound knowledge base which goes hand-in-hand with a practical emphasis and field experience merit attention. It is important, however, that the theoretical justification behind opting for more, or less, practice be made clear. As noted in a country like India, there is merit in moving from a more skill-based 'practical' training to a more reflective, autonomous training which is less prescriptive, but nevertheless also practical. Consideration also needs to be given to the extent to which the Sri Lanka approach in Colleges of Education towards a balanced curriculum of subject knowledge, pedagogical knowledge and practice teaching has produced good results. Attention might need to be paid to the approach being developed in Bangladesh: competency-based training can be very useful provided it is not mere skills training.

An interesting innovation which relies on a theory of training which is less skill based and more centred on supporting changes in practice which emphasise pupil learning, would fit the description given of the Pakistan field-based teacher training programme. The evaluation which was carried out suggests good results both in terms of teacher motivation and performance as well as in pupil learning. It would be interesting to discuss how elements of this programme, as well as of the BRAC programme in Bangladesh, could be incorporated in the conventional teacher training courses.

Support mechanisms

In this respect, the experience of India through its long-standing institutions and its recently created DIETs should be discussed. What are the positive elements that co-ordinating centres (or local resource centres) can offer, what elements of these do not work and why, and what perspectives for their further development are seen by the country participants?

Conclusion

Tentatively, it would seem that discussions could centre around the provision of more details on the projects outlined above, on the sources of funding that already exist and could still be sought, and what could be

shared in terms of experiences, materials and other resources. There are also alternatives outside the training system itself that have not been explored within the papers, but which might offer useful ideas and experiences. For example, consideration should be given to India's PROPEL programme and Bangladesh's BRAC experience.

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